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**SUMMARY TECHNICAL REPORT
OF THE
NATIONAL DEFENSE RESEARCH COMMITTEE**

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14

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SUMMARY TECHNICAL REPORT OF DIVISION 14, NDHC

VOLUME 3

BIBLIOGRAPHY OF DIVISION 14 AND RADIATION LABORATORY REPORTS

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VANNEVAR BUSH, DIRECTOR

NATIONAL DEFENSE RESEARCH COMMITTEE
JAMES B. CONANT, CHAIRMAN

DIVISION 14
A. L. LOOMIS, CHIEF

WASHINGTON, D. C., 1946

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NOTES ON THE ORGANIZATION OF NDRC

The duties of the National Defense Research Committee were (1) to recommend to the Director of OSRD suitable projects and research programs on the instrumentalities of warfare, together with contract facilities for carrying out these projects and programs, and (2) to administer the technical and scientific work of the contracts. More specifically, NDRC functioned by initiating research projects on requests from the Army or the Navy, or on requests from an allied government transmitted through the Liaison Office of OSRD, or on its own considered initiative as a result of the experience of its members. Proposals prepared by the Division, Panel, or Committee for research contracts for performance of the work involved in such projects were first reviewed by NDRC, and if approved, recommended to the Director of OSRD. Upon approval of a proposal by the Director, a contract permitting maximum flexibility of scientific effort was arranged. The business aspects of the contract, including such matters as materials, clearances, vouchers, patents, priorities, legal matters, and administration of patent matters were handled by the Executive Secretary of OSRD.

Originally NDRC administered its work through five divisions, each headed by one of the NDRC members. These were:

- Division A—Armor and Ordnance
- Division B—Bombs, Fuels, Gases, & Chemical Problems
- Division C—Communication and Transportation
- Division D—Detection, Controls, and Instruments
- Division E—Patents and Inventions

In a reorganization in the fall of 1942, twenty-three administrative divisions, panels, or committees were created, each with a chief selected on the basis of his outstanding work in the particular field. The NDRC members then became a reviewing and advisory group to the Director of OSRD. The final organization was as follows:

- Division 1—Ballistic Research
- Division 2—Effects of Impact and Explosion
- Division 3—Rocket Ordnance
- Division 4—Ordnance Accessories
- Division 5—New Missiles
- Division 6—Sub-Surface Warfare
- Division 7—Fire Control
- Division 8—Explosives
- Division 9—Chemistry
- Division 10—Absorbents and Aerosols
- Division 11—Chemical Engineering
- Division 12—Transportation
- Division 13—Electrical Communication
- Division 14—Radar
- Division 15—Radio Coordination
- Division 16—Optics and Camouflage
- Division 17—Physics
- Division 18—War Metallurgy
- Division 19—Miscellaneous
- Applied Mathematics Panel
- Applied Psychology Panel
- Committee on Propagation
- Tropical Deterioration Administrative Committee

NDRC FOREWORD

AS EVENTS of the years preceding 1940 revealed more and more clearly the seriousness of the world situation, many scientists in this country came to realize the need of organizing scientific research for service in a national emergency. Recommendations which they made to the White House were given careful and sympathetic attention, and as a result the National Defense Research Committee [NDRC] was formed by Executive Order of the President in the summer of 1940. The members of NDRC, appointed by the President, were instructed to supplement the work of the Army and the Navy in the development of the instrumentalities of war. A year later, upon the establishment of the Office of Scientific Research and Development [OSRD], NDRC became one of its units.

The Summary Technical Report of NDRC is a conscientious effort on the part of NDRC to summarize and evaluate its work and to present it in a useful and permanent form. It comprises some seventy volumes broken into groups corresponding to the NDRC Divisions, Panels, and Committees.

The Summary Technical Report of each Division, Panel, or Committee is an integral survey of the work of that group. The first volume of each group's report contains a summary of the report, stating the problems presented and the philosophy of attacking them, and summarizing the results of the research, development, and training activities undertaken. Some volumes may be "state of the art" treatises covering subjects to which various research groups have contributed information. Others may contain descriptions of devices developed in the laboratories. A master index of all these divisional, panel, and committee reports which together constitute the Summary Technical Report of NDRC is contained in this volume, which also includes a record of microfilm numbers, pertinent technical laboratory reports and reference material.

Some of the NDRC-sponsored researches which have been declassified by the end of 1945 were of sufficient popular interest that it was found desirable to report them in the form of monographs, such as the series on radar by Division 14 and the monograph on sampling inspection by the Applied Mathematics Panel. Since the material treated in them is not duplicated in the Summary Technical Report of NDRC, the

monographs are an important part of the story of these aspects of NDRC research.

In contrast to the information on radar, which is of widespread interest and much of which is released to the public, the research on subsurface warfare is largely classified and is of general interest to a more restricted group. As a consequence, the report of Division 6 is found almost entirely in its Summary Technical Report, which runs to over twenty volumes. The extent of the work of a Division cannot therefore be judged solely by the number of volumes devoted to it in the Summary Technical Report of NDRC: account must be taken of the monographs and available reports published elsewhere.

To A. L. Loomis, Chief of Division 14, the men who worked under his direction, and the personnel of the Division's contractors belongs major credit for the perfection of a device which forcefully altered the course of the war. The application of radar by all Services in all theaters of operation is an eloquent testimonial not only to the skill of these men but also to their will, their loyal cooperation, and their scientific integrity. The Summary Technical Report of the Division, prepared under the direction of the Division Chief and authorized by him for publication, therefore not only describes a major portion of their technical activities but is also a record of able American scientists and engineers cooperating fully in the defense of their country.

It is assuring to know that their contributions in the new field of microwaves will not be placed in intellectual cold storage to await purely military applications, but instead will soon find use in the industry, the transportation, the communications, and the scientific researches of a peacetime world.

For their work in opening a broad entrance to a new field of knowledge as well as for their invaluable contributions in a time of desperate strife, we join the Nation in expressing our sincere appreciation.

VANNEVAR BUSH, Director
Office of Scientific Research and Development

J. B. CONANT, Chairman
National Defense Research Committee

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FOREWORD

DIVISION 14 of the National Defense Research Committee [NDRC] was responsible for the microwave radar and Loran developments within the Office of Scientific Research and Development [OSRD]. Its original purpose, as defined at one of the early division meetings, was, "to organize and coordinate research, invention, design and manufacture in order to obtain the maximum number of effective applications of microwaves in the minimum time." Under this directive, Division 14 established and administered a total of 137 OSRD contracts with 18 academic and private research institutions, and 39 industrial concerns entering into almost every phase of the country's war-time radar program. The principal contractor, accounting for approximately 80 per cent of the division's contract appropriations, was The Massachusetts Institute of Technology Radiation Laboratory [MIT-RL]. This laboratory, through continuous growth and expansion of the scope of its activities, became the center of microwave radar research and development effort.

Without question the success of the program was due to the close collaboration of the many participating agencies and institutions. Many of the country's academic and industrial institutions worked with MIT-RL in research and development programs under U. S. Army and U. S. Navy as well as OSRD contracts. Radio and electrical equipment manufacturers were responsible for final engineering and large scale production of components and systems. The U. S. Army and U. S. Navy carried out procurement planning, proof testing, training, and the elaborate functions of supply and maintenance. Close technical liaison, furthermore, was maintained throughout the war with radar research organizations of the British Commonwealth of Nations. The contributions of the many participating organizations must be acknowledged by any single agency attempting to present its final report.

The NDRC Summary Technical Report is intended to include the pertinent results of each division's program. The selection of material for such a report invariably presents a difficult

problem. A choice must be made from the work of many organizations and individuals during a complex five-year program.

The Division 14 Summary Technical Report consists of three volumes. The first, *RADAR*, contains a summary of the Division 14 and MIT-RL activities, a report on HARP, and appendices listing the division's projects and contracts. Volume 2 of the Division 14 STR is entitled *MAAS, Military Airborne Radar Systems*. This volume is a detailed treatment of the design, development, installation, maintenance and performance of aircraft radar for such applications as search, bombing, navigation, interception and fire control. The volume is intended as a general text for use by officers and civilian engineers concerned with almost any aspect of aircraft radar development, engineering, procurement, training, or operational use. Volume 3 is a complete Bibliography of the contractors' and divisional reports prepared during the course of the program. It is intended to serve as a general guide to the division's activities.

The largest publication effort of Division 14 is the *Radiation Laboratory Series* prepared by the MIT-RL for publication by the McGraw-Hill Book Company, Inc. This set of monographs is considered as a supplement to the Division 14 Summary Technical Report. It consists of some 27 volumes and an index and is a complete report on the state of the radar art at the end of the war, including texts on fundamental electronics, components and systems design and engineering, peace-time applications, and Loran navigation. A list of the titles and an abstract of each book is contained in the Bibliography of this volume.

The progress and interim technical reports submitted by MIT-RL and other Division 14 contractors constitute valuable reference material on the division's program. They cover specific aspects of the work and are not duplicated by the Summary Technical Report or the *Radiation Laboratory Series*. All these (approximately 2,000) reports have been indexed by report number, subject, organization, and, in the case of the MIT-RL reports, by author in the Bibliography of this volume. Microfilm

prints of these reports are available to those who have access to the Summary Technical Reports.

Another category of reports which are included in the Bibliography and microfilms are the Division 14 Project Reports. These were Division 14's bimonthly reports of activities to the U. S. Army and U. S. Navy. Included are pertinent technical details of the systems, projects, and summaries of the basic research and component development activities. The final project report, NDRC 14-565, dated December 1945, reviews the entire program of the division. It contains an index of all Division 14 projects, including Service projects, with cross references to contracts and U. S. Army and U. S. Navy equipment designations.

The history of Division 14 has been prepared and edited by H. E. Guerlac for publication with the other volumes of the OSRD long history by the Little Brown Company, Inc., Boston. It traces the early work on radar before the war by the U. S. Army, U. S. Navy, British and various private institutions, describes the origin of NDRC's microwave development activities,

outlines the foundation of the Radiation Laboratory, and gives an historical summary of the principal division systems and components research program. A final section, which should be of general interest, reports on the field service activities of the division and the operational results obtained with several types of microwave-radar equipment.

Two important publications were originally intended for inclusion in the Division 14 Summary Technical Report but were deleted and published elsewhere. They are: *Development of Cadillac Airborne Early Warning Systems*, C. J. Kelly, Field Station, Naval Research Laboratory [NRL], Boston; and *The Gun Fire-Control System, Mark 56*, Navy Publication OP-1600 E.

I should like to express my appreciation to the authors, L. A. DuBridge, H. E. Guerlac, M. H. Johnson, O. Halpern, and to the other members of MIT-RL and Division 14 staff who assisted in the preparation of this volume.

A. L. LOOMIS
Chief, Division 14

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PREFACE

THE BIBLIOGRAPHY which follows indexes all of the approximately 2,000 technical reports on the microwave radar and Loran navigation research and development program of Division 14 of the National Defense Research Committee. The reports were prepared by The Massachusetts Institute of Technology Radiation Laboratory [MIT-RL] and the 58 other industrial and academic institutions under OSRD contract and in several instances by the Division 14 staff. All of these reports have been included in the Bibliography even though they have not been specifically referred to in the text of the two volumes of the Division 14 Summary Technical Report since they comprise, with the *MIT Radiation Laboratory Series*,^{*} a complete technical record of Division 14 activities.

Section 1 of the Bibliography is a numerical list of reports which have been assigned Division 14 report numbers. These reports are identified by the number 14 which precedes the serial number (e.g., 14-501). These include principally the interim and final technical reports submitted by the industrial and academic organizations, other than MIT-RL, in connection with their performance of radar research and development under OSRD contract assigned to Division 14. Also included are the administrative and summary reports prepared by the Division 14 organization such as the bimonthly Project Report and the several volumes of the U. S. Radar Survey. In the numerical index complete data are given on each report title, author, organization and OSRD contract number, and date.

Section 2 is a numerical index of regular reports, manuals, special reports and texts issued by MIT-RL under OSRD Contract OEMsr-262. They are identified throughout the Bibliography by the letters RL which precede the report number (e.g., RL-501, RL M-9, RL S-9, RL T-9). MIT-RL reports 1 to 399 were renumbered for uniformity from an early system of identification by groups within the laboratory. The original combination of group and serial

numbers is given in parenthesis after the revised serial number [e.g., RL-300 (61-18)].

Section 3 is a combined index by subject matter of both Division 14 and MIT-RL reports. Complete data are not repeated for each report so that reference to Sections 1 and 2 may be necessary.

Section 4 lists Division 14 reports by the organization responsible for their preparation. Reports issued by different divisions of a commercial concern or academic institution, or on different OSRD contracts, are combined under the titles of the central organizations.

Section 5 is an index of MIT-RL reports by author; it does not include the authors of NDRC reports of Division 14. Where two or more authors collaborated in the writing of a report, the report number is repeated under each name.

The security classifications of the reports are not given in the Bibliography. Advice as to the current classification of any OSRD report may be obtained from the Office of the Executive Secretary, OSRD, from the War Department Liaison Officer with NDRC, or from the Office of Research and Inventions, Navy Department.

The set of Division 14 and MIT-RL reports in the Bibliography have, with but a few exceptions, been microfilmed to facilitate future reference. The microfilm number assigned to the reports appears in references throughout this Bibliography and the Summary Technical Reports as 14-000.00-M1. Attention is directed to the classified index of Division 14 reports in the NDRC Summary Technical Report Microfilm Index Volume. Requests for microfilm prints of the set of reports should be addressed to the Research and Development Division, Office of Research and Inventions, Navy Department, Washington, D.C., or to the War Department Liaison Officer with the National Defense Research Committee, Army Service Forces, War Department, Washington, D.C.

Original copies of the Division 14 and MIT-RL reports will be found in the records of the Office of the Executive Secretary, OSRD; the OSRD Liaison Office; NDRC Division 14; MIT-RL Document Library. The reports were distributed also to several organizations in the

^{*} *MIT Radiation Laboratory Series*, in publication by the McGraw-Hill Book Company, New York, N. Y.

Navy Department including the Research and Development Division, Office of Research and Inventions; Naval Research Laboratory; Bureau of Ships; Bureau of Aeronautics; Bureau of Ordnance; and the U. S. Naval Academy; and to organizations in the War Department including the Office of the War Department Liaison Officer with NDRC; Office of the Chief Signal Officer; Signal Corps Engineering Laboratories; Evans Signal Laboratory; Headquarters, Army Ground Forces; Army Ground Forces Board No. 1, Fort Bragg; Headquarters, Army Air Forces, AC/AS-4; Continental Air Forces, Operations Analysis Division; Air Materiel Command Radar Laboratory; Air Materiel Command Watson Laboratories; and the Army Air Forces Proving Ground Command.

Copies of OSRD reports which have been declassified have been filed with the Office of the Publication Board, Department of Commerce,

Washington, D.C. Selected sets of these declassified reports from Division 14 have been given a limited distribution, through arrangement with the Library of Congress, to a number of technical reference libraries throughout the country including the following: National Bureau of Standards, The Library of Congress, The University of Chicago, Stanford University, Columbia University, California Institute of Technology, University of Illinois, Duke University, Iowa State College of Agriculture and Mechanic Arts, Princeton University, The New York Public Library, University of Michigan, Yale University, The University of Texas, The Johns Hopkins University, University of Rochester, The Ohio State University, Georgia School of Technology, Purdue University, Engineering Societies Library, University of Pennsylvania, Washington University, Cornell University, University of Minnesota.

CONFIDENTIAL

CONTENTS

PART	PAGE
I Numerical Index of Division 14, NDRC Reports	1
II Numerical Index of Radiation Laboratory Reports	21
III Subject Index of Division 14 and Radiation Laboratory Reports	61
IV Organization Index of Division 14 Reports	107
V Author Index of Radiation Laboratory Reports	117
OSRD Appointees	144
Contracts, Contractors, and Subject of Contracts	145
Titles of Division 14 Summary Technical Reports	153

PART I

NUMERICAL INDEX OF DIVISION 14, NDRC REPORTS

(Other than Radiation Laboratory Reports)

- | | | | |
|---------------|---|--------|--|
| 14-1 to 14-85 | No reports. | 14-99 | <i>Development of a Tunable IF Amplifier</i> , W. F. Freeman, Sylvania Electric Products, Inc., Nov. 16, 1942, OEMsr-380. Div. 14-241.32-M2 |
| 14-86 | <i>Report No. 1 of the Microwave Section</i> , J. G. Trump, Division D-1, NDRC, Mar. 10, 1941. Div. 14-504-M1 | 14-100 | <i>Use of Microwave for Detection Purposes, Bi-monthly Report</i> , Division D-1, NDRC, Mar. 15, 1942. Div. 14-504-M2 |
| 14-87 | <i>Western Electric D-160448 Input Equipment and Western Electric X-61901 Oscillators</i> , Bell Telephone Laboratories, Western Electric Company, November 1941, OEMsr-2. Div. 14-327.112-M1 | 14-101 | <i>Use of Microwave for Detection Purposes, Bi-monthly Report</i> , Division D-1, NDRC, June 1, 1942. Div. 14-504-M2 |
| 14-88 | <i>Long-Range Navigation Equipment, Microwave Committee Project 3</i> , R. N. Harmon, H. J. Dailey; Westinghouse Electric and Manufacturing Company, Sept. 15, 1941, OEMsr-73. Div. 14-327.114-M1 | 14-102 | <i>The Principles of Crystal Rectifiers</i> , F. Seitz, S. Pasternack, University of Pennsylvania, June 10, 1942, OEMsr-388. Div. 14-233.13-M1 |
| 14-89 | <i>Aircraft Position-Indicating Equipment (Receiving)</i> , R. A. Teare, Radio Corporation of America, July 22, 1941, NDCre-71. Div. 14-327.111-M1 | 14-103 | <i>Summary of Research on Radar Indicator Services</i> , H. W. Leverenz, OSRD 891, RCA Manufacturing Company, Inc., Radio Corporation of America, Apr. 11, 1942, NDCre-150. Div. 14-242.231-M2 |
| 14-90 | <i>Pulse Thyatrons, Progress Report for June 1941 to December 1941</i> , E. J. Lawton, General Electric Company, May 26, 1942, OEMsr-180. Div. 14-231.22-M2 | 14-104 | <i>Work on Slow Phosphors for Radar Indicator Services</i> , S. Dushman, OSRD 890, General Electric Company, May 18, 1942, OEMsr-248. Div. 14-242.231-M3 |
| 14-91 | <i>Instruction Book for Western Electric D-161131 Receiver and Western Electric D-161132 Indicator for a Long-Range Navigation System</i> , BTL-284, Bell Telephone Laboratories, Western Electric Company, October 1941, NDCre-205. Div. 14-327.111-M6 | 14-105 | <i>Report on Pulser Tube Development</i> , C. M. Slack, Westinghouse Electric and Manufacturing Company, May 15, 1942, OEMsr-288. Div. 14-231.21-M1 |
| 14-92 | <i>Two Megawatt Transmitters for NDRC Project 3</i> , General Electric Company, Dec. 9, 1941, OEMsr-9. Div. 14-327.112-M2 | 14-106 | <i>Three-Centimeter Receiving Tubes</i> , J. R. Pierce, A. L. Samuel, Bell Telephone Laboratories, Western Electric Company, June 22, 1942, NDCre-157. Div. 14-241.4-M2 |
| 14-93 | <i>Technical Report of Radiation Laboratory</i> , J. G. Trump, Division D-1, NDRC, June 1, 1941. Div. 14-502-M3 | 14-107 | <i>Progress Report on Hydrogen-Filled Thyatrons</i> , H. W. Lord, F. W. Crapuchettes, General Electric Company, Aug. 18, 1942, OEMsr-180. Div. 14-231.221-M1 |
| 14-94 | <i>Use of Microwave for Detection Purposes</i> , Division D-1, NDRC, Dec. 15, 1941. Div. 14-504-M2 | 14-108 | <i>Report on Developmental work on Pulse Thyatron Type XG-473</i> , A. C. Gable, General Electric Company, May 9, 1942, OEMsr-180. Div. 14-231.22-M1 |
| 14-95 | <i>Use of Microwave for Detection Purposes</i> , Division D-1, NDRC, Aug. 15, 1942. Div. 14-501-M6 | 14-109 | <i>Use of Microwave for Detection Purposes, Bi-monthly Report</i> , Division D-1, NDRC, Oct. 1, 1942. Div. 14-504-M2 |
| 14-99 | <i>Report of Work on Duplex Screen Tubes during 1941</i> , S. Dushman, General Electric Company, Oct. 14, 1942, OEMsr-10(a). Div. 14-242.231-M9 | 14-110 | <i>The Electrical Conductivity of Silicon and Germanium</i> , F. Seitz, Jr., University of Pennsylvania, Nov. 3, 1942, OEMsr-388. Div. 14-233.111-M1 |
| 14-97 | <i>Service Manual for Video Amplifier</i> , J. G. Brainerd, University of Pennsylvania, Jan. 23, 1943, OEMsr-387. Div. 14-241.31-M1 | 14-111 | <i>Transmission of Infrared in Waveguides</i> , H. A. Bethe, J. Schwinger, J. F. Carlson, L. J. Chu, Cornell University, Nov. 3, 1942, OEMsr-429. Div. 14-233.423-M2 |
| 14-98 | <i>Development of a Stable Non-Crystal Controlled Oscillator</i> , J. M. Cage, University of Colorado, Dec. 15, 1942, OEMsr-546. Div. 14-241.41-M2 | 14-112 | <i>Compounds of Silicon and Germanium</i> , F. Seitz, Jr., University of Pennsylvania, Nov. 18, 1942, OEMsr-388. Div. 14-233.111-M2 |

CONFIDENTIAL

- 14-113 *DC Burn-Out Temperature in Silicon Rectifiers*, A. W. Lawson, R. J. Maurer, P. H. Miller, I. I. Schiff, W. E. Stephens, University of Pennsylvania, Nov. 1, 1942, OEMar-388, Div. 14-233.112-M2
- 13-114 *Indicor Types as of October 1942*, Division D-1, NDRC, Div. 14-242-M8
- 14-115 *Investigation of Crystal Rectifier DC Characteristics*, H. J. Yearian, Purdue University, Dec. 3, 1942, OEMar-362, Div. 14-233.132-M1
- 14-116 *Theoretical Results on the TR Box*, H. A. Bethe, R. E. Marshak, J. Schwinger, Cornell University, Jan. 20, 1943, OEMar-429, Div. 14-233.312-M6
- 14-117 *Perturbation Theory for Cavities*, H. A. Bethe, J. Schwinger, Cornell University, Mar. 4, 1943, OEMar-429, Div. 14-211.5-M3
- 14-118 *Summary of Projects, Rimonthly Report*, Division 14, NDRC, Jan. 1, 1943, Div. 14-501-M8
- 14-119 *Further DC Burn-Out Experiments on Silicon and Germanium Rectifiers*, A. W. Lawson, P. H. Miller, R. J. Maurer, I. I. Schiff, W. E. Stephens, University of Pennsylvania, Jun. 1, 1943, OEMar-388, Div. 14-233.132-M2
- 14-120 *One-Continuer Magnetron Research*, J. M. B. Kellogg, Columbia University, Radiation Laboratory, Jan. 14, 1943, OEMar-485, Div. 14-232.111-M1
- 14-121 *Progress Report on Ultra-high Frequency Dielectrics*, A. von Hippel, OSRD 1197, Laboratory for Insulation Research, Massachusetts Institute of Technology, January 1943, OEMar-191, Div. 14-131.1-M1
- 14-122 *The Interaction Between Electromagnetic Fields and Dielectric Materials*, A. von Hippel, R. G. Breckenridge, OSRD 1198, Laboratory for Insulation Research, Massachusetts Institute of Technology, January 1943, OEMar-191, Div. 14-131.1-M2
- 14-123 *Junction Effect of Two Unequal Matched Coaxial Lines*, K. Weber, PIB-1A, Polytechnic Institute of Brooklyn, Sept. 16, 1942, OEMar-335, Div. 14-233.413-M3
- 14-124 *Summary of Projects, NDRC, Radar Division 14*, Mar. 1, 1943, Div. 14-501-M8
- 14-125 *Electron Microscopy of Tungsten Points*, A. W. Lawson, W. E. Stephens, University of Pennsylvania, Mar. 10, 1943, OEMar-388, Div. 14-233.11-M1
- 14-126 *Noise in Crystal Rectifiers*, L. I. Schiff, University of Pennsylvania, Mar. 10, 1943, OEMar-388, Div. 14-233.131-M1
- 14-127 *Spectroscopic Determination of Aluminum in Silicon*, A. W. Lawson, P. H. Miller, University of Pennsylvania, Mar. 10, 1943, OEMar-388, Div. 14-233.112-M5
- 13-128 *Theory of the TR Box*, H. A. Bethe, Cornell University, May 14, 1943, OEMar-429, Div. 14-233.312-M7
- 14-129 *The Diffusion Theory of Crystal Rectifiers*, R. G. Sachs, Purdue University, Sept. 10, 1942, OEMar-362, Div. 14-233.13-M2
- 14-130 *Computers for Radar Control of Plane-to-Plane Gunfire*, J. B. Russell of Division 7, NDRC, J. C. Sheridan, Mar. 15, 1943, Div. 14-323.1-M1
- 14-131 *Theory of Bark-Trace Tubes*, I. F. Seitz, O. Stern, I. Estermann, R. J. Maurer, Carnegie Institute of Technology, April 27, 1943, OEMar-900, Div. 14-242.232-M2
- 14-132 *Abridged Report on Circuits for Improving Focus on Electrostatic Cathode-Ray Tubes under Conditions of Intensity and Deflection Modulation*, H. E. Farnsworth, Brown University, June 1, 1943, OEMar-382, Div. 14-242.24-M1
- 14-133 *Theory of Noise in Conductors, Semiconductors, and Crystal Rectifiers*, V. F. Weiskopf of University of Rochester, Purdue University, May 12, 1943, OEMar-362, Div. 14-125-M6
- 14-134 *Investigation of Power Supply Requirements as a Function of Future Radar Circuit Developments*, M. M. Hubbard, Mar. 8, 1943, OEMar-262, Div. 14-235-M2
- 14-135 *Power Supply for Airborne Radar Equipment*, M. M. Hubbard, Feb. 11, 1943, OEMar-262, Div. 14-235.1-M2
- 14-136 *Analysis of Commutation of Direct-Current Machinery at High Altitudes*, I. E. Ross, Jr., Consultant of Division 14 for Project SC-34, Nov. 28, 1942, Div. 14-235.11-M1
- 14-137 *Simulated High-Altitude Brush Testing Equipment*, I. E. Ross, Jr., Consultant of Division 14 for Project SC-34, Mar. 30, 1943, Div. 14-235.11-M2
- 14-138 *Clearance for Carbon Brush Investigation*, I. E. Ross, Jr., Consultant of Division 14 for Project SC-34, Apr. 9, 1943, Div. 14-235.11-M3
- 14-139 *Analysis of Commutation of Direct-Current Machinery at High Altitudes*, I. E. Ross, Jr., Consultant of Division 14 for Project SC-34, Apr. 15, 1943, Div. 14-235.11-M4
- 14-140 *Barrier Capacity in Silicon Cartridge Rectifiers*, Andrew W. Lawson, P. H. Miller, L. I. Schiff, W. E. Stephens, University of Pennsylvania, May 1, 1943, OEMar-388, Div. 14-233.112-M7
- 14-141 *Summary of Projects, Rimonthly Report*, Division 14, NDRC, May 1, 1943, Div. 14-501-M8
- 14-142 *Measurement of Dielectric Constant and Loss with Standing Waves in Coaxial Wave Guides*, A. von Hippel, D. G. Jelatis, W. H. Westphal, Massachusetts Institute of Technology, April 1, 1943, OEMar-191, Div. 14-233.413-M4
- 14-143 *Determination of Logarithmic Constants of Crystal Rectifiers with the Oscilloscope*, H. J. Yearian, Purdue University, Apr. 20, 1943, OEMar-362, Div. 14-251.71-M2

CONFIDENTIAL

- 14-144 *Measurement of Conversion Gain with a Modulated Oscillator*, R. N. Smith, Purdue University, Apr. 20, 1943, OEmSr-362. Div. 14-233.14-M1
- 14-145 *Crystal Clock Project, Third Progress Report*, W. C. Elmore, J. F. Marshall, D. L. Goldwater, W. P. G. Swann, Bartol Research Foundation, The Franklin Institute, May 1, 1943, OEmSr-821. Div. 14-327.114-M3
- 14-146 *Noise Reduction by Delayed Feed-Back*, T. T. Eaton, Radio Corporation of America, Apr. 15, 1943, OEmSr-252. Div. 14-125.2-M2
- 14-147 *Report of Progress of Work on Dark-Trace Tubes*, S. Dushman, General Electric Company, Mar. 1, 1943, OEmSr-248. Div. 14-242.232-M1
- 14-148 *Magnetron Cathode Studies, Progress Report*, W. F. G. Swann, W. E. Danforth, M. A. Pomerantz, C. D. Prater, W. K. Ramsey, Bartol Research Foundation, The Franklin Institute, May 1, 1943, OEmSr-358. Div. 14-232.14-M1
- 14-149 *Kenotron-Type Cathode Construction and Life Test*, P. Kusch, Radiation Laboratory, Columbia University, May 26, 1943, OEmSr-485. Div. 14-232.143-M2
- 14-150 *Report on Kenotron Pressure Gaps*, C. M. Slack, E. G. F. Arnett, Westinghouse Electric and Manufacturing Company, Dec. 31, 1942, OEmSr-709. Div. 14-231.21-M3
- 14-151 *Propagation of 10-Centimeter Waves on a 52-Mile Optical Path over Land, The Correlation of Signal Patterns with Radiosonde Data*, P. A. Anderson, C. L. Barker, K. E. Fitzsimmons, S. T. Stephenson, Washington State College, June 10, 1943, OEmSr-728. Div. 14-122.21-M1
- 14-152 *Radiotelephone Communication on 3000 Megacycles*, P. A. Anderson, C. L. Barker, K. E. Fitzsimmons, S. T. Stephenson, Washington State College, June 12, 1943, OEmSr-728. Div. 14-261-M2
- 14-153 *High-Frequency Rectification Efficiency of Crystals*, A. W. Lawson, P. H. Miller, L. I. Schiff, W. E. Stephens, University of Pennsylvania, July 1, 1943, OEmSr-388. Div. 14-233.133-M1
- 14-154 *Operating Characteristics of Multivibrators and Gates, Progress Report No. 1*, D. A. Wilbur, Rensselaer Polytechnic Institute, Jan. 6, 1943, OEmSr-781. Div. 14-212.7-M2
- 14-155 *Operating Characteristics of Multivibrators and Gates and Related Multivibrators, Progress Report No. 2*, D. A. Wilbur, Rensselaer Polytechnic Institute, June 1, 1943, OEmSr-781. Div. 14-212.7-M6
- 14-156 *Mechanical Vacuum Switches, Transmission Line and RC Pulsing Circuits*, J. V. Lebacqz, T. W. Jarnie, University of California, June 1, 1943, OEmSr-652. Div. 14-230-M2
- 14-157 *X-Ray Emission from Radar Equipment*, L. Rovner, Division 14, NDRC, Jan. 15, 1943. Div. 14-600-M2
- 14-158 *Analysis of 6SA7 Gated Amplifier*, B. Rossi, J. Kurshan, Cornell University, July 14, 1943, OEmSr-768. Div. 14-241.3-M4
- 14-159 *Analysis of Double Triode Integrator*, B. Rossi, N. Nereson, Cornell University, July 14, 1943, OEmSr-768. Div. 14-212.8-M2
- 14-160 *Range-Tracking Circuit with Position Memory*, B. Rossi, K. Greisen, Cornell University, July 14, 1943, OEmSr-768. Div. 14-244.5-M2
- 14-161 *Range-Tracking Circuit with Velocity Memory*, B. Rossi, W. B. Jones, Cornell University, Nov. 8, 1943, OEmSr-768. Div. 14-244.5-M3
- 14-162 *Theory of Signal to Noise Ratio of Crystal Mixers*, H. Hurwitz, Jr., Cornell University, May 1, 1943, OEmSr-429. Div. 14-233.12-M6
- 14-163 *Interference of Loran Pulses with Radiotelephone and Telegraph Reception*, M. J. Kelly, Bell Telephone Laboratories, Western Electric Company, Mar. 4, 1943, OEmSr-777. Div. 14-327.114-M2
- 14-164 *Coaxial Exponential Tapers*, E. Peskin, E. Weber, PIB-5, Polytechnic Institute of Brooklyn, May 20, 1943, OEmSr-335. Div. 14-233.413-M6
- 14-165 *Effect of Etch on Crystal Rectifiers*, A. W. Lawson, W. K. Stephens, University of Pennsylvania, Mar. 10, 1943, OEmSr-388. Div. 14-233.112-M4
- 14-166 *Capacity in Crystal Rectifiers*, A. W. Lawson, P. H. Miller, W. K. Stephens, University of Pennsylvania, Mar. 10, 1943, OEmSr-388. Div. 14-233.112-M6
- 14-167 *Crystal Noise as a Function of DC Bias and 30-Mc Impedance Measured with a Diode Noise Source*, R. N. Smith, Purdue University, June 25, 1943, OEmSr-362. Div. 14-233.15-M2
- 14-168 *Theory of Contact Rectifiers*, E. G. Sachs, Purdue University, June 15, 1943, OEmSr-362. Div. 14-233.13-M3
- 14-169 *Magnetron Cathode Studies, Progress Report*, W. E. Danforth, M. A. Pomerantz, C. D. Prater, W. K. Ramsey, W. F. G. Swann, Bartol Research Foundation, The Franklin Institute, July 1, 1943, OEmSr-358. Div. 14-232.14-M1
- 14-170 *Bi-monthly Project Status Report and Summary of Projects*, Division 14, NDRC, July 1, 1943. Div. 14-501-M9
- 14-171 *Theory of Thick Inductive Windows with Small Openings*, W. A. Bowers, H. Hurwitz, Jr., H. Levine, Cornell University, Nov. 26, 1943, OEmSr-429. Div. 14-233.423-M6
- 14-172 *The Theory of Dark-Trace Tubes, II*, F. Seitz, O. Stern, I. Estermann, R. J. Maurer, Carnegie Institute of Technology, Sept. 1, 1943, OEmSr-900. Div. 14-242.232-M4
- 14-173 *Ionization of Donator Levels in Crystal Rectifiers by Thermal Agitation*, A. W. Lawson, P. H. Miller, L. I. Schiff, W. E. Stephens, Uni-

CONFIDENTIAL

- versity of Pennsylvania, July 7, 1943, OCMsr-388. Div. 14-233.134-M1
- 14-174 *Development of Pulsed Signal Generator*, F. L. Barroughs, W. P. Maeller, Sylvania Electric Products, Inc., June 21, 1943, OCMsr-583. Div. 14-251.6-M1
- 14-175 *Crystal Clock Project and 10-Kc Oscillator, Progress Report*, W. C. Elmore, J. F. Marshall, D. L. Goldwater, W. F. G. Swann, Bartol Research Foundation, The Franklin Institute, Aug. 1, 1943, OCMsr-821. Div. 14-327.114-M4
- 14-176 *Sealing and Relative Efficiency of Different Sized Magnetrans*, W. F. G. Swann, Bartol Research Foundation, The Franklin Institute, Aug. 6, 1943, OCMsr-358. Div. 14-232.19-M9
- 14-177 *Darkening and Bleaching of KCl*, I. I. Estermann, O. Stern, G. I. Kirkland, Carnegie Institute of Technology, Sept. 1, 1943, OCMsr-900. Div. 14-242.232-M5
- 14-178 *Two Notes on the Potentials Developed in Cathode-Ray Screens during Bombardment*, F. Seitz, Carnegie Institute of Technology, Sept. 1, 1943, OCMsr-900. Div. 14-242.232-M6
- 14-179 *Propagation of Signals on 45.1, 474, and 2,800 Mc from Empire State Building to Hanpanage and Riverhead, Long Island*, G. S. Wickizer, A. M. Bratton, Radio Corporation of America, July 20, 1943, OCMsr-601. Div. 14-122.121-M1
- 14-180 *Radio-active Detection of Aluminum in Silicon*, A. W. Lawson, P. H. Miller, L. I. Schiff, W. E. Stephens, University of Pennsylvania, Sept. 1, 1943, OCMsr-388. Div. 14-233.112-M8
- 14-181 *Effect of Tapping on Barrier Capacity*, Andrew W. Lawson, L. I. Schiff, W. E. Stephens, P. H. Miller, University of Pennsylvania, Sept. 1, 1943, OCMsr-388. Div. 14-233.112-M9
- 14-182 *Behavior of Silicon Crystals at Low-Level Powers*, A. W. Lawson, P. H. Miller, L. I. Schiff, W. E. Stephens, University of Pennsylvania, Sept. 1, 1943, OCMsr-388. Div. 14-233.112-M10
- 14-183 *Memoranda on the May 1943 Meeting on Duck-Trace Tubes at Radiation Laboratory*, I. Estermann, R. J. Maurer, F. Seitz, Carnegie Institute of Technology, OCMsr-900, [May 1943]. Div. 14-242.232-M3
- 14-184 *Bimonthly Project Status Report and Summary of Projects*, Division 14, NDRC, Sept. 1, 1943. Div. 14-501-M9
- 14-185 *Descriptive Technical Specification, Fighter Tail-Warning Equipment, AN/APS-13 (XA1)*, Radio Corporation of America, Sept. 10, 1943, OCMsr-1025. Div. 14-321.11-M2
- 14-186 *Behaviour of Westinghouse Silicon as a Low-Level Detector*, Andrew W. Lawson, Margaret N. Lewis, P. H. Miller, W. E. Stephens, University of Pennsylvania, Sept. 20, 1943, OCMsr-388. Div. 14-233.112-M11
- 14-187 *Magnetron Cathode Studies, Progress Report—Supplement No. 2*, W. R. Danforth, C. D. Prater, M. A. Pomerantz, W. E. Ramsey, W. F. G. Swann, Bartol Research Foundation, The Franklin Institute, Sept. 1, 1943, OCMsr-358. Div. 14-232.14-M1
- 14-188 *Project List as of Sept. 15, 1943*, J. G. Trump, Division 14, NDRC, Sept. 28, 1943. Div. 14-520-M1
- 14-189 *Noise in Silicon Rectifiers at Low Temperatures*, Andrew W. Lawson, P. H. Miller, W. E. Stephens, University of Pennsylvania, Oct. 1, 1943, OCMsr-388. Div. 14-233.112-M12
- 14-190 *Final Report of Research and Development Conducted on Lighthouse Tube Transmitter-Receiver Units*, R. G. Clapp, Philco Corporation, Sept. 20, 1943, OCMsr-832. Div. 14-310.212-M3
- 14-191 *Airborne Loran Equipment*, A. F. Bischoff, General Electric Company, Sept. 1, 1943, OCMsr-723. Div. 14-327.1-M2
- 14-192 *The Cyclic Radiometer and Wired Sound Techniques for Detailed Low-Level Meteorological Sounding*, P. A. Anderson, C. L. Barker, K. E. Fitzsimmons, S. T. Stephenson, Washington State College, Oct. 4, 1943, OCMsr-728. Div. 14-122.2-M1
- 14-193 *Crystal Clock Project and 10-Kc L-C Oscillator, Progress Report*, W. C. Elmore, J. F. Marshall, D. L. Goldwater, W. F. G. Swann, Bartol Research Foundation, The Franklin Institute, Oct. 1, 1943, OCMsr-821. Div. 14-327.114-M5
- 14-194 *Dependence of IF Impedance and Noise Temperature of Crystal Rectifiers on Matching Conditions*, A. W. Lawson, P. H. Miller, W. E. Stephens, University of Pennsylvania, Oct. 6, 1943, OCMsr-388. Div. 14-233.131-M2
- 14-195 *Lightweight X-Band Radar, Progress Report No. 1*, R. S. Holmes, Radio Corporation of America, July 1, 1943, OCMsr-684. Div. 14-210-M2
- 14-196 *Index of Radar Systems*, Office of the Secretary, Division 14, NDRC, Oct. 1, 1943.
- 14-197 *Comparison of Wedge and Cone Contacts as Fug Silicon*, Andrew W. Lawson, Margaret N. Lewis, P. H. Miller, W. E. Stephens, University of Pennsylvania, Oct. 22, 1943, OCMsr-388. Div. 14-233.112-M13
- 14-198 *A Memorandum on the Scattering of Light by DT Screens*, R. J. Maurer, S. Lasaf, Carnegie Institute of Technology, Nov. 1, 1943, OCMsr-900. Div. 14-242.232-M7
- 14-199 *AIA-1 Scanner Development Program, Completion Report*, T. I. Moseley, Daimo Victor, Inc., Feb. 3, 1941, OCMsr-960. Div. 14-234.323-M3
- 14-200 *Lodur Pulse-Direction-Finding Receiver*, G. Mountjny, License Division Laboratory, Radio Corporation of America, Apr. 29, 1943, OCMsr-1029. Div. 14-327.111-M2
- 14-201 *A Device for the Selection and Manufacture of Low-Level Detectors*, A. W. Lawson, M. N.

CONFIDENTIAL

- Lewis, P. H. Miller, W. E. Stephens, University of Pennsylvania, Oct. 27, 1943, OEMsr-388. Div. 14-233.152-M2
- 14-202 *The Propagation of 10-Centimeter Waves Over Land Paths of 14, 52, and 115 Miles*, P. A. Anderson, C. L. Barker, K. E. Fitzsimmons, S. T. Stephenson, Washington State College, Oct. 26, 1943, OEMsr-728. Div. 14-122.21-M2
- 14-203 *Development of a Power Supply and Temperature-Stabilized Oscillator for the Battery-Operated Loran Receiver*, W. Lukas, Emerson Radio and Phonograph Corporation, Oct. 29, 1943, OEMsr-1143. Div. 14-235.1-M4
- 14-204 *Analysis of Silicon for Non-Volatile Matter*, Andrew W. Lawson, K. A. Krieger, University of Pennsylvania, Nov. 11, 1943, OEMsr-388. Div. 14-233.112-M14
- 14-205 *Darkening and Bleaching of KCL II. The Effect of Temperature*, I. Estermann, O. Stern, G. I. Kirkland, Carnegie Institute of Technology, Nov. 24, 1943, OEMsr-900. Div. 14-242.232-M8
- 14-206 *Characteristics of Simplified Loran Receiving Equipment*, G. Mountjoy, E. Schoenfeld, G. D. Hulst, W. Brown, License Division Laboratory, Radio Corporation of America, Nov. 11, 1943, OEMsr-977. Div. 14-327.111-M4
- 14-207 *Development of Airborne Loran Receiver-Indicator Model LRR-1*, A. Van Dyck, License Division Laboratory, Radio Corporation of America, Sept. 9, 1942, OEMsr-443. Div. 14-327.1-M1
- 14-208 *Development of Loran Receiver-Transmitter*, A. Van Dyck, License Division Laboratory, Radio Corporation of America, Mar. 17, 1943, OEMsr-443. Div. 14-327.1-M1
- 14-209 *Magnetron Cathode Studies*, W. E. Dnnforth, D. L. Goldwater, M. A. Pomerantz, C. D. Prater, W. E. Ramsey, W. F. G. Swann, Bartol Research Foundation, The Franklin Institute, Nov. 1, 1943, OEMsr-358. Div. 14-232.14-M1
- 14-210 *Auxiliary Equipment for the MIT Coax Instrument and Its Use*, A. von Hippel, D. C. Jelatis, W. B. Westphal, M. G. Haugen, R. E. Charles, Laboratory for Insulation Research, Massachusetts Institute of Technology, Nov. 1, 1943, OEMsr-191. Div. 14-131.2-M1
- 14-211 *Special Protective Coatings, Progress Report*, G. D. Patterson, G. T. Vaala, J. L. Keats, E. I. du Pont de Nemours and Company, Jan. 14, 1944, OEMsr-1199. Div. 14-132-M2
- 14-212 *Propagation of 10-Centimeter Waves over an Inland Lake, Correlated with Meteorological Soundings*, P. A. Anderson, K. E. Fitzsimmons, S. T. Stephenson, Washington State College, Nov. 12, 1943, OEMsr-728. Div. 14-122.22-M1
- 14-213 *Bi-monthly Project Status Report and Summary of Projects*, Division 14, NDRC, Nov. 1, 1943. Div. 14-501-M9
- 14-214 *Memorandum Upon the Behaviour of DT Screens Containing Magnesium*, R. J. Maurer, S. Lasof, Carnegie Institute of Technology, Dec. 1, 1943, OEMsr-900. Div. 14-242.232-M9
- 14-215 *Progress Report on Coaxial Platinum Film Attenuators*, J. W. E. Griemsmann, E. Weber, PIB-2, Polytechnic Institute of Brooklyn, Sept. 21, 1942, OEMsr-335. Div. 14-251.1-M1
- 14-216 *Theory of Coaxial Attenuators*, J. W. E. Griemsmann, E. Weber, PIB-3, Polytechnic Institute of Brooklyn, Sept. 21, 1943, OEMsr-335. Div. 14-251.1-M2
- 14-217 *Soldering to Glass*, S. A. Johnson, PIB-4, Polytechnic Institute of Brooklyn, Dec. 28, 1942, OEMsr-335. Div. 14-131.12-M1
- 14-218 *Instructions for Use of PIB Type 1B2 Bolometer Terminal*, S. A. Johnson, PIB-6, Polytechnic Institute of Brooklyn, May 26, 1943, OEMsr-335. Div. 14-252.41-M4
- 14-219 *Notes on Use of Bolometers for Ultra-High-Frequency Attenuation Measurements*, J. Ebert, PIB-7, Polytechnic Institute of Brooklyn, June 2, 1943, OEMsr-335. Div. 14-252.41-M5
- 14-220 *The 1B2 Bolometer Terminal*, E. Weber, S. A. Johnson, J. Ebert, PIB-8, Polytechnic Institute of Brooklyn, June 11, 1943, OEMsr-335. Div. 14-252.41-M6
- 14-221 *An Experimental 1/2-Inch Universal Stub*, J. Ebert, J. W. E. Griemsmann, PIB-9, Polytechnic Institute of Brooklyn, July 1, 1943, OEMsr-335. Div. 14-233.421-M4
- 14-222 *N-Band Wave-Guide Tuning Section*, J. Ebert, PIB-10, Polytechnic Institute of Brooklyn, July 23, 1943, OEMsr-335. Div. 14-233.412-M14
- 14-223 *Progress Report on the Development of One- and Three-Cm Magnetrons*, J. M. B. Kellogg, Radiation Laboratory, Columbia University, Nov. 15, 1943, OEMsr-485. Div. 14-232.11-M1
- 14-224 *Recent Research on Silicon Rectifiers*, A. W. Lawson, M. N. Lewis, P. H. Miller, W. E. Stephens, University of Pennsylvania, Jan. 1, 1944, OEMsr-388. Div. 14-233.112-M15
- 14-225 *Preliminary Measurements on GE X-Band Transmitter-Receiver Gas Switch*, A. L. Samuel, C. F. Crandell, MM-43-140-68, Bell Telephone Laboratories, Western Electric Company, Nov. 26, 1943, OEMsr-1218. Div. 14-233.311-M3
- 14-226 *Crystal Clock Project and 10-Kc L-C Oscillator, Final Report*, W. C. Kimore, J. F. Marshall, D. L. Goldwater, W. F. G. Swann, Bartol Research Foundation, The Franklin Institute, Jan. 1, 1944, OEMsr-821. Div. 14-327.114-M6
- 14-227 *Investigation of Effect of Manufacturing and Test Equipment Variables on X-Band Characteristics of Bell System Thermistors*, J. N. Shive, Bell Telephone Laboratories, Western Electric Company, Nov. 26, 1943, OEMsr-1212. Div. 14-252.42-M1
- 14-228 *Simplified Loran Receiving Equipment*, G. Mountjoy, E. Schoenfeld, G. D. Hulst, License

CONFIDENTIAL

- Division Laboratory, Radio Corporation of America, June 25, 1943, OEMsr-977. Div. 14-327.111-M3
- 14-229 *Sintering or Melting of Boron Powder, Progress Report*, C. E. Rick, T. D. McKinley, E. I. da Pont de Nemours and Company, Nov. 1, 1943, OEMsr-1139. Div. 14-233.113-M1
- 14-230 *Two Motor-Driven Gun Turrets*, S. Godet, General Electric Company, Dec. 10, 1943, OEMsr-10(c). Div. 14-244.21-M3
- 14-231 *Sintered Boron Project, Progress Report*, C. E. Rick, T. D. McKinley, E. I. da Pont de Nemours and Company, Dec. 1, 1943, OEMsr-1139. Div. 14-233.113-M1
- 14-232 *Sintered Boron Project, Progress Report*, C. E. Rick, T. D. McKinley, E. I. da Pont de Nemours and Company, Jan. 1, 1944, OEMsr-1139. Div. 14-233.113-M1
- 14-233 *The Elimination of Extraneous Resonance Effects in Tunable Centimeter Magnetrans*, A. Ashkin, P. Kusch, A. Nordsieck, Radiation Laboratory, Columbia University, Jan. 14, 1944, OEMsr-485. Div. 14-232.12-M2
- 14-234 *The Tuning Properties of the Tunable Magnetrans in the Three-Coupled Band*, P. Kusch, A. Nordsieck, Radiation Laboratory, Columbia University, Jan. 11, 1944, OEMsr-485. Div. 14-232.16-M5
- 14-235 *Cold Impedance of K5 Tubes*, G. Becker, S. Millman, Radiation Laboratory, Columbia University, Jan. 28, 1944, OEMsr-485. Div. 14-232.111-M3
- 14-236 *Development of a Tail-Warning Radar System, TWL-2 (AN/APS-13)*, R. L. Welsh, Radio Corporation of America, Dec. 30, 1943, OEMsr-1025. Div. 14-321.11-M3
- 14-237 *Table of Dielectric Materials, Volume I*, A. von Hippel, Laboratory for Insulation Research, Massachusetts Institute of Technology, February 1944, OEMsr-191. Div. 14-131.1-M3
- 14-238 *Project Report [Radar System Projects]*, Division 14, NDRC, Feb. 1, 1944. Div. 14-501-M11
- 14-239 *Columbia Radiation Laboratory Progress Report*, J. M. B. Kellogg, Columbia University, Radiation Laboratory, Jan. 1, 1944, OEMsr-485. Div. 14-232.1-M6
- 14-240 *Sintering and Melting of Boron Powder, Progress Report*, C. E. Rick, T. D. McKinley, E. I. da Pont de Nemours and Company, Feb. 1, 1944, OEMsr-1139. Div. 14-233.113-M1
- 14-241 *Special Protective Coatings, Progress Report*, G. D. Patterson, G. T. Vaala, J. L. Kents, E. I. da Pont de Nemours and Company, Feb. 11, 1944, OEMsr-1199. Div. 14-132-M2
- 14-242 *Project Report [Radar System Projects]*, Division 14, NDRC, Apr. 1, 1944. Div. 14-501-M11
- 14-243 *Report of Radio Relaying of Radar Signals*, V. J. Duke, E. D. Goodale, National Broadcasting Company, Radio Corporation of America, Dec. 30, 1943, OEMsr-1127. Div. 14-267-M4
- 14-244 *Index of Radar Systems*, Office of the Secretary, Division 14, NDRC, Feb. 15, 1944.
- 14-245 *Waveguide Output for 1.35-Centimeter Magnetrans*, S. Millman, Radiation Laboratory, Columbia University, Feb. 1, 1944, OEMsr-485. Div. 14-233.412-M16
- 14-246 *Reports of Tests on Resonant Range Follow-Up System*, D. W. Moore, H. E. Hale, Fairchild Camera and Instrument Corporation, July 10, 1944, OEMsr-874. Div. 14-264-M6
- 14-247 *Special Protective Coatings, Monthly Report*, J. L. Kents, G. D. Patterson, G. T. Vaala, E. I. da Pont de Nemours and Company, Sept. 33, 1944, OEMsr-1199. Div. 14-132-M2
- 14-248 *Operations of the Project Tube Shop* [Harrison, N. J.], G. R. Shaw, J. M. Spooner, RCA Victor Division, Radio Corporation of America, Dec. 12, 1943, OEMsr-477. Div. 14-503-M2
- 14-249 *Back-Trace Radar-Indicator Screens, Progress Report No. 2*, H. W. Leverenz, RCA Victor Division, Radio Corporation of America, Feb. 18, 1944, NDRC-150. Div. 14-242.232-M10
- 14-250 *Index of Division 14, NDRC Reports, Other Than Radiation Laboratory Reports*, Division 14, NDRC, May 1, 1943. Div. 14-510-M3
- 14-251 *Magnetron Cathode Studies, Progress Report*, W. E. Danforth, D. L. Goldwater, M. A. Pomerantz, C. D. Prater, W. E. Ramsey, W. F. G. Swann, Bartol Research Foundation, The Franklin Institute, Jan. 1, 1944, OEMsr-358. Div. 14-252.14-M1
- 14-252 *Progress Report on the Sintering and Melting of Boron*, C. E. Rick, T. D. McKinley, Pigments Department, E. I. da Pont de Nemours and Company, Mar. 1, 1941, OEMsr-1139. Div. 14-233.113-M1
- 14-253 *Experiments with Double-Layer DT Screens*, R. J. Maarer, S. Lasof, Carnegie Institute of Technology, May 12, 1944, OEMsr-900. Div. 14-242.232-M14
- 14-254 *Monthly Summary and Informal Monthly Progress Report on Protective Coatings*, J. L. Kents, G. D. Patterson, G. T. Vaala, Chemical Department, E. I. da Pont de Nemours and Company, Mar. 14, 1944, OEMsr-1199. Div. 14-132-M2
- 14-255 *The Investigation of the Effect of Manufacturing and Test-Equipment Variables on the X-Band Characteristics of Bell System Thermistors*, J. N. Shive, J. B. Stucky, Bell Telephone Laboratories, Western Electric Company, Jan. 21, 1944, OEMsr-1212. Div. 14-252.42-M4
- 14-256 *Naine Spectrum of Silicon Rectifiers*, F. H. Miller, M. N. Lewis, L. I. Schiff, W. E. Stephens, University of Pennsylvania, Mar. 20, 1944, OEMsr-388. Div. 14-233.112-M16
- 14-257 *The Theory of Back-Trace Tubes III*, F. Seitz, O. Stera, I. Estermann, R. J. Maarer, Car-

CONFIDENTIAL

- negie Institute of Technology, Apr. 6, 1944, OEmar-900. Div. 14-242.232-M11
- 14-258 *The Depth of the Darkened Region and the Build-Up of Darkening and Persistent Trace in KCl Screens*, I. Estermann, G. I. Kirkland, Carnegie Institute of Technology, Apr. 10, 1944, OEmar-900. Div. 14-242.232-M12
- 14-259 *The Theory of Crystal Mixers in Terms of Measurable-Mixer Constants*, R. N. Smith, E. S. Akley, Purdue University, Mar. 24, 1944, OEmar-362. Div. 14-233.12-M7
- 14-260 *Progress Report for Columbia Radiation Laboratory*, J. M. B. Kellogg, Radiation Laboratory, Columbia University, February 1944, OEmar-486. Div. 14-232.111-M4
- 14-261 *The Fixed Tuned Broad-Band Transmitter Disconnect Switch, Some Preliminary Considerations*, MM-140-17, A. L. Samuel, Bell Telephone Laboratories, Western Electric Company, Mar. 28, 1944, OEmar-1218. Div. 14-233.312-M8
- 14-262 *Progress Report on Sintering and Melting of Boron Powder*, C. E. Rick, T. D. McKinley, Pigments Department, E. I. du Pont de Nemours and Company, Apr. 1, 1944, OEmar-1139. Div. 14-233.113-M1
- 14-263 No report.
- 14-264 *Monthly Summary and Informal Monthly Progress Report on Protective Coatings*, J. L. Keats, G. D. Patterson, G. T. Vaala, W. D. Bailey, Chemical Department, E. I. du Pont de Nemours and Company, Apr. 14, 1944, OEmar-1199. Div. 14-132-M2
- 14-265 *Theory of Dark-Trace Tubes II*, F. Seitz, Carnegie Institute of Technology, May 8, 1944, OEmar-900. Div. 14-242.232-M13
- 14-266 *Columbia Radiation Laboratory Progress Report*, J. M. B. Kellogg, Columbia University, Mar. 1944, OEmar-486. Div. 14-232.111-M4
- 14-267 *Audio Noise Tester*, P. H. Miller, Jr., M. H. Greenblatt, W. E. Stephens, University of Pennsylvania, May 10, 1944, OEmar-388. Div. 14-233.151-M3
- 14-268 *Development and Construction of a Local Torret Gyra Lead-Computing Sight for AGS Radar*, J. L. Fowler, General Electric Company, Apr. 27, 1944, OEmar-1149. Div. 14-323.12-M4
- 14-269 *The Spectral Distribution of the Luminescence of Red-Screen Materials*, R. L. Markson, Allen B. Du Mont Laboratories, Inc., Mar. 24, 1944, OEmar-1141. Div. 14-242.233-M2
- 14-270 *Division 14 Contract List*, Office of the Secretary, Division 14, NDRC, June 1, 1944. Div. 14-520-M2
- 14-271 *General Dynamical Considerations Applied to Piezo-Electric Oscillations of a Quartz Crystal in an Electrical Circuit*, W. F. G. Swann, Bartol Research Foundation, The Franklin Institute, Apr. 26, 1944, OEmar-1220. Div. 14-422.1-M1
- 14-271S *Supplement to General Dynamical Considerations Applied to Piezo-Electric Oscillations of a Quartz Crystal in an Electrical Circuit*, Supplement I, W. F. G. Swann, Bartol Research Foundation, The Franklin Institute, Nov. 1, 1944, OEmar-1220. (See NDRC 14-557 for Supplement II.) Div. 14-422.1-M1
- 14-272 *Progress Report on Sintering or Melting of Boron*, C. E. Rick, T. D. McKinley, Pigments Department, E. I. du Pont de Nemours and Company, May 1, 1944, OEmar-1139. Div. 14-233.113-M1
- 14-273 *Monthly and Informal Monthly Progress Report on Special Protective Coatings*, J. L. Keats, G. D. Patterson, G. T. Vaala, R. E. Thomas, W. D. Bailey, Chemical Department, E. I. du Pont de Nemours and Company, May 13, 1944, OEmar-1199. Div. 14-132-M2
- 14-274 *X-Ray Video Crystals*, W. E. Meyerhof, W. E. Stephens, University of Pennsylvania, May 20, 1944, OEmar-388. Div. 14-241.51-M1
- 14-275 *The Attila Receiver*, J. C. Wight, General Electric Company, Mar. 23, 1944, OEmar-233. Div. 14-241.2-M2
- 14-276 *The Polystyrene Plastics as High-Frequency Dielectrics*, Arthur von Hippel, L. G. Wesson, S. L. Whitchee, Laboratory for Insulation Research, Massachusetts Institute of Technology, May 1944, OEmar-191. Div. 14-131.13-M1
- 14-277 *Project Report [Radar System Projects]*, Office of Secretary, Division 14, Radar, NDRC, June 1, 1944. Div. 14-501-M11
- 14-278 *Radar Research Project Report* (Supplement to Division 14 Report No. 277), Office of the Secretary, Division 14 Radar, NDRC, July 1, 1944. Div. 14-501-M12
- 14-279 *Final Report, Including the Design of Stroking Motor for a Hydraulic Servomechanism*, G. S. Brown, Massachusetts Institute of Technology, July 11, 1944, OEmar-1162. Div. 14-214.3-M8
- 14-280 *Special Protective Coating, Progress Report*, J. L. Keats, G. D. Patterson, G. T. Vaala, W. D. Bailey, Chemical Department, E. I. du Pont de Nemours and Company, June 13, 1944, OEmar-1199. Div. 14-132-M2
- 14-281 *The Investigation of the Effect of Manufacturing and Test-Equipment Variables on the X-Ray Characteristics of Bell System Thermistors*, J. B. Stucky, Bell Telephone Laboratories, Western Electric Company, May 27, 1944, OEmar-1212. Div. 14-252.42-M4
- 14-282 *Production and Effects of a Depletion Layer in Doped Silicon*, B. Serin, W. E. Stephens, University of Pennsylvania, May 29, 1944, OEmar-388. Div. 14-233.112-M17
- 14-283 *Progress Report on Sintering or Melting of Boron Powder*, C. E. Rick, T. D. McKinley, Pigments Department, E. I. du Pont de Nemours and Company, June 1, 1944, OEmar-1139. Div. 14-233.113-M1

CONFIDENTIAL

- 14-284 *High-Frequency Characteristics of Rectifiers*, K. F. Herzfeld, Purdue University, May 5, 1944, OEMar-362. Div. 14-233.133-M2
- 14-285 *Quantitative Spectroscopic Analysis of Impurities in Germanium and Silicon*, W. Scanlon, Purdue University, May 5, 1944, OEMar-362. Div. 14-233.111-M3
- 14-286 *Theory of Small Deviations from Pure Diode Behavior*, K. F. Herzfeld, Purdue University, May 5, 1944, OEMar-362. Div. 14-233.134-M4
- 14-287 *Development of Three-Phase Aircraft Alternator*, B. E. Wallace, Leland Electric Company, Sept. 6, 1943, OEMar-609. Div. 14-235.1-M3
- 14-288 *Coordinate Transformation Circuits Using Resolvers and Coordinate Transformation by Means of Electrical Networks*, B. L. Miller, P. B. Weiss, W. F. G. Swann, Bartol Research Foundation, The Franklin Institute, June 1, 1944, OEMar-1220. Div. 14-212.61-M1
- 14-289 *The Sperry Stabilized Aircraft Gun-Laying System (AGL-2), Intermediate Phase*, J. P. Hansen, Sperry Gyroscope Company, May, 1944, OEMar-642. Div. 14-323.13-M2
- 14-290 *Design and Test of Project Eagle Airfoil*, F. R. Collbohm, SN-4922, Douglas Aircraft Company, Feb. 4, 1944, OEMar-1054. Div. 14-234.51-Mt
- 14-291 *Special Protective Coatings, Progress Report*, W. D. Bailey, J. L. Keats, G. D. Patterson, G. T. Vaala, Chemical Department, E. I. du Pont de Nemours and Company, July 14, 1944, OEMar-1199. Div. 14-132-M2
- 14-292 *Sintering or Melting of Boron Powder, Progress Report*, C. E. Rick, T. D. McKinley, Pigments Department, E. I. du Pont de Nemours and Company, July 1, 1944, OEMar-1139. Div. 14-233.113-M1
- 14-293 *Apparatus for the Transformation of Rectangular coordinates Using Armatures*, P. B. Weiss, B. L. Miller, Bartol Research Foundation, The Franklin Institute, July 10, 1944, OEMar-1220. Div. 14-413-M2
- 14-294 *Final Report on the Supersonic Radar Trainer Project*, J. F. Marshall, H. M. Schwartz, Bartol Research Foundation, The Franklin Institute, July 20, 1944, OEMar-1220. Div. 14-423-M4
- 14-295 *Cathode Sparking, Effect of Superimposed D.C. and Role of Conting Resistance*, W. E. Danforth, W. E. Ramsey, W. F. G. Swann, M. A. Pomerantz, D. L. Goldwater, Bartol Research Foundation, The Franklin Institute, July 12, 1944, OEMar-358. Div. 14-232.143-M3
- 14-296 *Sparkling of Oxide-Coated Cathodes*, W. E. Ramsey, Bartol Research Foundation, The Franklin Institute, July 15, 1944, OEMar-358. Div. 14-232.141-M1
- 14-297 *A Portable Signal Generator for Loran Receivers*, G. Mountjoy, W. Brown, E. Schoenfeld, G. D. Hulst, Industry Service Division, Radio Corporation of America, June 27, 1944, OEMar-977. Div. 14-327.111-M5
- 14-298 *Propagation of Signals on 45.1, 474, and 2,800-Mc from Empire State Building to Hempstead and Riverhead, Long Island, New York*, G. S. Wlekizer, A. M. Braaten, RCA Victor Division, Radio Corporation of America, July 31, 1944, OEMar-691. Div. 14-122.121-M3
- 14-299 *Technical Report on K-Band Magnetron*, P. A. Kallscher, SR-252, Westinghouse Electric and Manufacturing Company, May 22, 1944, Supplement Aug. 21, 1944, OEMar-1165. Div. 14-232.111-M5
- 14-300 *High Dielectric Constant Ceramics*, R. G. Breckenridge, A. P. de Bretteville, Jr., J. M. Brownlow, F. G. Chesley, G. Oster, L. Tisza, W. B. Westphal, Arthur von Hippel, Laboratory for Insulation Research, Massachusetts Institute of Technology, Aug. 1944, OEMar-191. Div. 14-131.11-M1
- 14-301 *Project Report [Radar System Project]*, Office of the Secretary, Division 14 Radar, NDRC, Aug. 1, 1944. Div. 14-501-M11
- 14-302 *Aging of KC1 Crystals and Screens Under Electron Bombardment*, I. Estermann, G. I. Kirkland, Carnegie Institute of Technology, Feb. 1, 1945, OEMar-900. Div. 14-242.232-M16
- 14-303 No report.
- 14-304 *Effect of Heat Treatment on Low-Level Performance*, R. Serin, W. E. Stephens, University of Pennsylvania, Aug. 3, 1944, OEMar-388. Div. 14-233.112-M18
- 14-305 *On the Distribution of the Average Noise Current in Receivers*, M. Kac, Cornell University, Sept. 2, 1944, OEMar-429. Div. 14-125-M9
- 14-306 *Monthly Summary and Informal Progress Report*, J. L. Keats, G. T. Vaala, G. D. Patterson, Chemical Department, E. I. du Pont de Nemours and Company, Aug. 11, 1944, OEMar-1199. Div. 14-132-M2
- 14-307 *Progress Report on Sintering or Melting of Boron Powder*, C. E. Rick, T. D. McKinley, J. N. Tully, Pigments Department, E. I. du Pont de Nemours and Company, Aug. 1, 1944, OEMar-1139. Div. 14-233.113-M1
- 14-308 *Temperature Variation of Low-Level Crystal Performance*, A. H. Smith, B. Serin, W. E. Meyerhol, W. E. Stephens, University of Pennsylvania, Aug. 17, 1944, OEMar-388. Div. 14-233.1-M4
- 14-309 *Back-Bombardment of Magnetron Cathodes*, W. E. Danforth, C. D. Prater, D. L. Goldwater, Bartol Research Foundation, The Franklin Institute, Aug. 25, 1944, OEMar-358. Div. 14-232.143-M4
- 14-310 *Secondary Electron Emission from Oxide-Coated Magnetron Cathodes*, M. A. Pomerantz, D. L. Goldwater, Bartol Research Foundation, The Franklin Institute, Aug. 25, 1944, OEMar-358. Div. 14-232.141-M2
- 14-311 *Note on the Measurement of Noise Tempera-*

CONFIDENTIAL

- ture, P. H. Miller, Jr., B. Goodman, M. H. Greenblatt, University of Pennsylvania, Aug. 24, 1944, OEMar-388. Div. 14-233.151-M4
- 14-312 *Design of Egg Beater Scanning Antenna for the Eagle Radar Bomb Sight and Construction of a Model, Final Report*, G. T. Loran, International Projector Corporation, Aug. 11, 1944, OEMar-1089. Div. 14-234.122-M4
- 14-313 *Development of Electrical Brushes through Powdered Metallurgy, Technical Report of Research Work Conducted at Metal Powder Laboratory*, R. L. Klein, H. Hirsch, Stevens Institute of Technology, Nov. 30, 1943, OEMar-1022. Div. 14-235.11-M5
- 14-314 No report.
- 14-315 *Development of 1B37 TR Tube*, O. H. Biggs, Sylvania Electric Products, Inc., Sept. 19, 1944, OEMar-999. Div. 14-233.31-M7
- 14-316 *High-Power Series Gaps, Progress Report*, F. S. Goucher, Bell Telephone Laboratories, Western Electric Company, Sept. 5, 1944, OEMar-1212. Div. 14-231.21-M5
- 14-317 *A New Method for the Precision Measurement of Waveguide Discontinuities*, W. H. Pickering, D. W. Hagelbarger, C. Y. Meng, S. C. Snowden, California Institute of Technology, October 1944, OEMar-1311. Div. 14-233.423-M8
- 14-318 *Sintering or Melting of Boron and Preparation of Hyper-Pure Germanium, Progress Report*, C. E. Rick, T. D. McKinley, Pigments Department, E. I. du Pont de Nemours and Company, Sept. 1, 1944, OEMar-1139. Div. 14-233.113-M2
- 14-319 *Radar Angle Tracking, Government Radar Patent Program, Technical Report No. 1*, J. C. Batchelor, Division 14, NDRC, June 28, 1944.
- 14-320 *Rotational Line Width in the Absorption Spectrum of Atmospheric Water Vapor and Supplement* (dated February 1, 1945), E. F. Barker, A. Adel, University of Michigan, Oct. 10, 1944, OEMar-1361. Div. 14-122.13-M1
- 14-321 *AIA-1 Scanner Development Program, Progress Report*, T. I. Moseley, Dalmo Victor, Inc., Aug. 14, 1944, OEMar-960. Div. 14-234.323-M2
- 14-322 *Equivalent Circuit for Resonant Modes of a Magnetron, Zero Mode*, W. Lamb, Radiation Laboratory, Columbia University, Oct. 25, 1944, OEMar-485. Div. 14-232.12-M4
- 14-323 *The Resonant Modes of the "Rising Sun" (A Tube) Anode*, N. Kroll, W. Lamb, Radiation Laboratory, Columbia University, Oct. 25, 1944, OEMar-485. Div. 14-232.12-M3
- 14-324 *Sintering or Melting of Boron and Preparation of Hyper-Pure Germanium, Progress Report*, C. E. Rick, T. D. McKinley, Pigments Department, E. I. du Pont de Nemours and Company, Oct. 1, 1944, OEMar-1139. Div. 14-233.113-M2
- 14-325 *Special Protective Coatings, Monthly Summary*, P. Salzberg, G. D. Patterson, J. L. Keats, G. T. Vaala, W. D. Bailey, Chemical Department, E. I. du Pont de Nemours and Company, Oct. 13, 1944, OEMar-1199. Div. 14-132-M2
- 14-326 *The Properties of Evaporated Layers of Potassium Chloride Containing Small Additions of Metallic Elements When Subjected to Electron Bombardment*, R. J. Maurer, S. Lasaf, Carnegie Institute of Technology, Nov. 15, 1944, OEMar-900. Div. 14-242.232-M15
- 14-327 *Development of Series Spark Gaps for the Period January 1, 1943 to June 30, 1944*, E. G. F. Arnott, Westinghouse Electric and Manufacturing Company, Aug. 14, 1944, OEMar-709. Div. 14-231.21-M4
- 14-328 *K-Band Germanium Crystals, Bimonthly Progress Report, Aug. 15 to Oct. 15, 1944*, H. Q. North, General Electric Company [Oct. 15, 1944], OEMar-1377. Div. 14-233.111-M4
- 14-329 *A Converter for 170-Kc Loran Signals*, E. Schoenfeld, G. D. Hulst, W. Brown, Industry Service Division, Radio Corporation of America, Oct. 20, 1944, OEMar-977. Div. 14-327.113-M1
- 14-330 *Final Technical Report for P-1 Adaptor Development*, T. T. Goldsmith, R. L. Campbell, Allen B. Du Mont Laboratories, Inc., Oct. 20, 1944, OEMar-1140. Div. 14-242.31-M1
- 14-331 *U. S. Radar Survey, Section 1, Airborne Radar*, Office of the Secretary, Division 14, NDRC, Nov. 1, 1944. (See 14-568.) Div. 14-310.2-M1
- 14-332 *U. S. Radar Survey, Section 2, Shipborne Radar*, Office of the Secretary, Division 14, NDRC, Apr. 1, 1945. Div. 14-310.3-M1
- 14-333 *U. S. Radar Survey, Section 3, Ground Radar*, Office of the Secretary, Division 14, NDRC, Sept. 1, 1944. (See 14-451.)
- 14-334 *U. S. Radar Survey, Section 4, Navigational Radar*, Office of the Secretary, Division 14, NDRC, Jan. 1, 1945. (See 14-455.)
- 14-335 No report.
- 14-336 *U. S. Radar Survey, Section 6, Test Equipment*, Office of the Secretary, Division 14, NDRC, Sept. 1, 1944. (See 14-465.)
- 14-337 *Evaporated Films of Germanium and Silicon*, M. N. Lewis, J. H. Taylor, R. J. Gibson, University of Pennsylvania, Oct. 10, 1944, OEMar-388. Div. 14-233.111-M5
- 14-338 *Ground-Based Radars Other Than Racons and Aircraft Landing, Project Report*, Office of the Secretary, Division 14 Radar, NDRC, Oct. 1, 1944. Div. 14-501-M11
- 14-339 *Government Radar Patent Program, Technical Report No. 2, Precise Range Measurement and Tracking*, J. C. Batchelor, Division 14, NDRC, Sept. 23, 1944.
- 14-340 *Instruction Book for Precision PPI Adaptor, Du Mont Type No. 255 (Indicator-Tracker Unit BC 1465)*, T. T. Goldsmith, Allen B. Du Mont Laboratories, Inc., Sept. 22, 1944, OEMar-1140. Div. 14-242.31-M2

CONFIDENTIAL

- 14-341 *Preparation of High-Voltage Germanium Crystals*, R. M. Whaley, Paul Pickar, Purdue University, Nov. 1, 1944, OEMar-362.
Div. 14-233.111-M6
- 14-342 *The High-Voltage Germanium Rectifier, Section I—Experimental*, S. Benzer, Purdue University, Nov. 1, 1944, OEMar-362. (See NDRC 14-375 for Section II.)
Div. 14-233.111-M7
- 14-343 *The Preparation of Saubio Films (Scheme A)*, P. L. Salzberg, Engineering Division, E. I. du Pont de Nemours and Company, Nov. 1, 1944, OEMar-1199.
Div. 14-132-M5
- 14-344 *Special Protective Coatings—I, Survey of Binder (Use A)*, April 1944 to Sept. 4, 1944, G. T. Borchardt, E. I. du Pont de Nemours and Company, Feb. 8, 1945, OEMar-1199.
Div. 14-132-M3
- 14-345 *Special Protective Coatings—II, Formulation Studies—Composition Variables*, Feb. 1, 1944, to Aug. 10, 1944, M. S. Raasch, Chemical Department, E. I. du Pont de Nemours and Company, Aug. 14, 1944, OEMar-1199.
Div. 14-132-M3
- 14-346 *Special Protective Coatings—III, Formulation Studies—Physical Processing Variables*, Feb. 1, 1944 to Aug. 1, 1944, W. V. Freed, E. I. du Pont de Nemours and Company, OEMar-1199.
Div. 14-132-M3
- 14-347 *Special Protective Coatings—IV, Pigment Evaluation Studies*, Feb. 1, 1944, to Aug. 31, 1944, E. D. Bailey, Chemical Department, E. I. du Pont de Nemours and Company, OEMar-1199.
Div. 14-132-M3
- 14-348 *Special Protective Coatings—V, Film Thickness Evaluation*, Feb. 9, 1944 to July 25, 1944, A. A. Johnson, E. I. du Pont de Nemours and Company, OEMar-1199.
Div. 14-132-M3
- 14-349 *Special Protective Coatings—VI, Cross-Knifed Films for Practical Work at MIT*, Mar. 8, 1944 to July 1, 1944, W. V. Freed, W. F. Pings, E. I. du Pont de Nemours and Company, OEMar-1199.
Div. 14-132-M3
- 14-350 *Special Protective Coatings—VII, Knife Coating on Semiworks Wheels*, Dec. 23, 1943 to Mar. 20, 1944 and June 20, 1944 to July 28, 1944, A. W. Larchar, E. I. du Pont de Nemours and Company, OEMar-1199.
Div. 14-132-M3
- 14-351 *Special Protective Coatings—VIII, Large-Scale Coating Trials Investigation of Fabric-Coating Equipment*, Dec. 14, 1943 to June 6, 1944, B. Graham, Chemical Department, E. I. du Pont de Nemours and Company, OEMar-1199.
Div. 14-132-M3
- 14-352 *Special Protective Coatings—IX, Spray Trials at Tulede [Engineering Phases, Quality Phases]*, Apr. 2, 1944 to June 2, 1944, A. A. Johnson, E. I. du Pont de Nemours and Company, OEMar-1199.
Div. 14-132-M3
- 14-353 *Special Protective Coatings—X, Development of Cement and Paint Making Procedures for Scheme A*, Apr. 17, 1944 to Sept. 12, 1944, E. D. Bailey, B. Graham, E. I. du Pont de Nemours and Company, OEMar-1199.
Div. 14-132-M3
- 14-354 *Special Protective Coatings—XI, Development of Machine-Spraying Process for Scheme A*, Apr. 1, 1944 to Sept. 15, 1944, H. D. Foster, E. I. du Pont de Nemours and Company, OEMar-1199.
Div. 14-132-M3
- 14-355 *Special Protective Coatings—XII, Characterization of Metal Flakes*, C. G. Wortz, E. I. du Pont de Nemours and Company, May 24 to Sept. 7, 1945, OEMar-1199.
Div. 14-132-M3
- 14-356 *Special Protective Coatings—XIII, Preparation of Film by Calendering*, W. B. Pings, E. I. du Pont de Nemours and Company, June 19, 1944 to Dec. 31, 1944, OEMar-1199.
Div. 14-132-M3
- 14-357 *Special Protective Coatings, Methods of Analysis for Aluminum Film and Its Ingredients*, A. H. Hale, Chemical Department, Mar. 15, 1944 to June 24, 1944, E. I. du Pont de Nemours and Company, July 1944, OEMar-1199.
Div. 14-132-M4
- 14-358 *Special Protective Coatings, Monthly Summary*, P. L. Salzberg, G. D. Patterson, G. T. Vaala, W. E. Bailey, E. I. du Pont de Nemours and Company, Nov. 14, 1944, OEMar-1199.
Div. 14-132-M2
- 14-359 *High-Power Series Gaps, Bimonthly Report*, F. S. Goucher, Bell Telephone Laboratories, Western Electric Company, Nov. 7, 1944, OEMar-1409.
Div. 14-231.21-M5
- 14-360 *Metallized-Glass Attenuators and Miscellaneous R-F Test Accessories*, E. Weber, Polytechnic Institute of Brooklyn, January 1944, OEMar-335.
Div. 14-251.1-M6
- 14-361 *Radar Scanner Development Program, Progress Report*, T. I. Moseley, Dalmo Victor, Inc., Sept. 30, 1944, OEMar-960, Div. 14-234.323-M3
- 14-362 *Sintering or Melting of Boron and Preparation of Hyperpure Germanium, Progress Report*, T. D. McKinley, E. I. du Pont de Nemours and Company, Nov. 1, 1944, OEMar-1139.
Div. 14-233.113-M2
- 14-363 *Device for Determination of the Vertical by Means of Cosmic Rays*, B. Rossi, F. C. Chromey, H. S. Sack, Cornell University, July 10, 1944, OEMar-768.
Div. 14-600-M3
- 14-364 *Preliminary Results on Calibration of Autotransformers*, H. S. Sack, J. J. Taylor, R. N. Work, Cornell University, Jan. 16, 1945, OEMar-768.
Div. 14-214.5-M2
- 14-365 *Errors in Attenuation Measurements Caused by Reflection Losses*, E. Weber, PIH-39, Polytechnic Institute of Brooklyn, Mar. 16, 1945, OEMar-335.
Div. 14-251.1-M4
- 14-366 *Mica Windows for Waveguide Output Magnetrans*, L. Malter, R. L. Jepsen, L. R. Bloom, RCA Victor Division, Radio Corporation of

CONFIDENTIAL

- America, Dec. 5, 1944, OEMsr-1943.
Div. 14-233.423-M9
- 14-367 *Waveguide Output Magnetrans Employing Fused-Quartz Output Transformers*, L. J. Malter, J. L. Moll, RCA Victor Division, Radio Corporation of America, Jan. 15, 1945, OEMsr-1043. Div. 14-232.111-M7
- 14-368 *Special Mechanical Counter for the Mack III or Phase-Shift Loran Indicator*, submitted by A. F. McCulloh, International Business Machines Corporation, Oct. 18, 1944, OEMsr-1338. Div. 14-327.114-M8
- 14-369 *Skiatron Projection Cathode-Ray Tubes with Dark-Trace PIN Screens*, R. B. Jones, N. A. Merck, L. B. Hendrick, RCA Victor Division, Radio Corporation of America, July 13, 1944, NIDCrc-150. Div. 14-242.22-M2
- 14-379 *Manual of Operation and Maintenance for SM Radar Trainer*, D. D. Israel, Emerson Radio and Phonograph Corporation, April 1944, OEMsr-890.
- 14-371 *Final Report SM Trainer Development*, M. L. Levy, Emerson Radio and Phonograph Corporation, Oct. 9, 1944, OEMsr-890. Div. 14-411.5-M4
- 14-372 *Final Report on the Building of Basic SCR-584 Trainer and Advanced SCR-584 Trainer*, W. H. Howe, The Foxboro Company, Jan. 24, 1944, OEMsr-689. Div. 14-411.5-M2
- 14-373 *Project Report*, Division 14, NDRC, Dec. 1, 1944. Div. 14-501-M11
- 14-374 *Development of High Back Voltage Germanium Rectifiers*, Interim Report No. 1, H. C. Theuerer, J. H. Scaff, Bell Telephone Laboratories, Western Electric Company, Nov. 21, 1944, OEMsr-1408. Div. 14-233.111-M8
- 14-375 *The High-Voltage Germanium Rectifier, Section II—Theoretical*, S. Benzer, Purdue University, Dec. 26, 1944, OEMsr-362. (See NDRC 14-342 for Section I.) Div. 14-233.111-M10
- 14-376 *Cathode-Ray Tube Detectors*, H. E. Farnsworth, Department of Physics, Brown University, January 1944, OEMsr-382. Div. 14-242.24-M2
- 14-377 *Effect of Small Crystallites on Conductivity*, B. Goodman, University of Pennsylvania, Apr. 25, 1945, OEMsr-388. Div. 14-131.3-M3
- 14-378 *Special Protective Coatings, Monthly Summary*, P. L. Salzberg, G. D. Patterson, G. T. Vaala, E. I. du Pont de Nemours and Company, Dec. 13, 1944, OEMsr-1199. Div. 14-132-M2
- 14-379 *Preparation of Exponential Decay Powders and Screens ZnF:Mn, ZnMgF:Mn and MgSiO:Mn*, B. S. Ellefson, J. L. Berberet, L. W. Evans, R. K. Gessford, W. H. Ottemiller, A. J. Grimsone, Sylvania Electric Products, Inc., Dec. 1, 1944, OEMsr-1295. Div. 14-242.233-M3
- 14-380 *Preliminary Instructions for Experimental HRY Equipment*, Revised, Zenith Radio Corporation, Jan. 20, 1943, OEMsr-369. Div. 14-310.14-M2
- 14-381 *K-Band Germanium Crystals, Bimonthly Progress Report*, Oct. 15, 1944 to Dec. 15, 1944, H. Q. North, General Electric Company, [Dec. 15, 1944.] OEMsr-1377. Div. 14-233.111-M4
- 14-382 *Final Report, Transformer Model Shop*, W. A. Sumner, Westinghouse Electric and Manufacturing Company, Dec. 29, 1944, OEMsr-1112. Div. 14-211.4-M2
- 14-383 *Final Report on K-Band Oscillator, Type A5022A*, A. P. Kauzmann, RCA Victor Division, Radio Corporation of America, Nov. 7, 1944, OEMsr-872. Div. 14-241.411-M5
- 14-384 *Government Radar Patent Program, Technical Report No. 3, Magnetrans*, J. C. Batchelor, Division 14, NDRC, Nov. 11, 1944.
- 14-385 *Final Technical Report on AGI-I Development*, General Electric Company, 1944, OEMsr-233. Div. 14-323.13-M4
- 14-386 *Final Report—Part I—Sintering and Melting of Boron, Part II, Preparation of Hyperpure Germanium*, Aug. 1, 1943 to Oct. 31, 1944, T. D. McKinley, E. I. du Pont de Nemours and Company [Oct. 31, 1944], OEMsr-1139. Div. 14-233.113-M3
- 14-387 *Crystal Audio Noise*, P. H. Miller, M. H. Greenblatt, University of Pennsylvania, Jan. 5, 1945, OEMsr-388. Div. 14-233.151-M6
- 14-388 *Project Report, Supplement*, Division 14, NDRC, Jan. 1, 1945. Div. 14-501-M12
- 14-389 *Monthly Summary, Special Protective Coatings*, P. L. Salzberg, G. D. Patterson, G. T. Vuula, E. I. du Pont de Nemours and Company, Jan. 12, 1945, OEMsr-1199. Div. 14-132-M2
- 14-390 No report.
- 14-391 *Government Radar Patent Program, Technical Report No. 4, Duplexing*, J. C. Batchelor, Division 14, NDRC, Nov. 30, 1944.
- 14-392 *Motor Torpedo Boat [MTH] Computing Radar Sight for Blind, Semiblind and Visual Fire*, R. H. Wallace, C. G. Hebel, Sperry Products, Inc., Dec. 15, 1944, OEMsr-1337. Div. 14-323.5-M4
- 14-393 *U. S. Radar Survey, Section 7, Nomenclature Index*, Division 14, NDRC, Dec. 15, 1944. Div. 14-519-M2
- 14-394 *Test Equipment for Germanium Second-Detector Units*, R. N. Smith, H. J. Yearian, Purdue University, Jan. 25, 1945, OEMsr-362. Div. 14-233.152-M4
- 14-395 *Special Protective Coatings, Physical Performance Tests on Preferred Sambo System Under Simulated Service Conditions*, W. A. Hoffman, C. W. Theobald, E. I. du Pont de Nemours and Company, Jan. 6, 1945, OEMsr-1199. Div. 14-132-M6
- 14-396 *HUPX Antenna, Type A*, J. Epstein, Radio Corporation of America, July 21, 1944, OEMsr-684. Div. 14-234.112-M2

CONFIDENTIAL

- 14-397 *Frequency Stabilization of Oscillators by a Method Particularly Adapted to the Higher Frequencies and Magnetron Sources*, L. E. Norton, Radio Corporation of America, May 1, 1944, OEMar-684. Div. 14-241.412-M1
- 14-398 *High-Power Series Gaps*, F. S. Goucher, Bell Telephone Laboratories, Western Electric Company, Jan. 15, 1945, OEMar-1409. Div. 14-231.21-M5
- 14-399 *Germanium Crystal Rectifier for Radar Receivers and Indicator Circuits, Interim Report No. 2*, J. H. Sraff, H. C. Theuerer, Bell Telephone Laboratories, Western Electric Company, Dec. 16, 1944, OEMar-1408. Div. 14-231.111-M9
- 14-400 *Project Report, Division 14 Radar, NDRC*, Feb. 1, 1945. Div. 14-501-M11
- 14-401 *Program Report on Broad-Band Fixed-Tuned TR and Anti-TR Gun Switching Tubes*, M. D. Flske, General Electric Company, Dec. 22, 1944, OEMar-1306. Div. 14-233.311-M4
- 14-402 *Final Report on Broad-Band TR and Anti-TR Tubes*, A. L. Samuel, C. F. Crandell, J. E. Clark, Bell Telephone Laboratories, Western Electric Company, Sept. 30, 1944, OEMar-1218. Div. 14-233.31-M8
- 14-403 *Special Protective Coatings, Monthly Summary*, P. L. Salzberg, G. D. Patterson, G. T. Vaala, E. I. du Pont de Nemours and Company, Feb. 14, 1945, OEMar-1199. Div. 14-132-M2
- 14-404 *The Scattering of Electromagnetic Radiation by a Narrow Rectangular Strip of Infinite Conductivity*, E. S. Aksley, Purdue University, Dec. 28, 1944, OEMar-362. Div. 14-111-M11
- 14-405 *Handy Guide to Crystal Types (with Supplement dated May 10, 1944)*, W. E. Stephens, University of Pennsylvania, Feb. 15, 1945, OEMar-388. Div. 14-233.1-M5
- 14-406 *K-Band Germanium Crystals, Bimonthly Progress Report, December 15, 1944, to February 15, 1945*, H. Q. North, General Electric Company [Feb. 15, 1944], OEMar-1377. Div. 14-233.111-M4
- 14-407 *Final Report on Ultraportable Racon (RUPX)*, P. J. Herbst, Radio Corporation of America, Nov. 30, 1944, OEMar-684. Div. 14-328.111-M4
- 14-408 *Hermetic Seal Collored Hofer Development*, S. E. Lull, Sylvania Electric Products, Inc., Feb. 26, 1945, OEMar-1352. Div. 14-225-M2
- 14-409 *Instantaneous-Voltage Measurement by Use of a Trigger Circuit, Final Technical Report*, R. G. Kloeffer, K. H. Martin, Kansas State College, Feb. 17, 1944, OEMar-560. Div. 14-212.8-M5
- 14-410 *Precision Aircraft Scanner*, R. W. Parter, General Electric Company, Jan. 1, 1944, OEMar-540. Div. 14-244.326-M2
- 14-411 *Final Report on Pulse Thyatrons*, P. W. Crapuchettes, General Electric Company, Apr. 10, 1943, OEMar-180. Div. 14-231.22-M3
- 14-412 *Photoeffects in Pure Silicon*, P. H. Miller, M. H. Greenblatt, University of Pennsylvania, Mar. 20, 1945, OEMar-388. Div. 14-233.112-M19
- 14-413 *Properties of Germanium High-Buck Voltage Rectifier Units*, L. L. Boyarsky, R. N. Smith, H. J. Yearian, Purdue University, Mar. 19, 1945, OEMar-362. Div. 14-233.111-M12
- 14-414 *High-Power Series Gaps, Bimonthly Report for January and February, 1945*, F. S. Goucher, Bell Telephone Laboratories, Western Electric Company, Mar. 13, 1945, OEMar-1409. Div. 14-231.21-M5
- 14-415 *Final Report on Tubes for Lightweight X-Band Radar and Ultraportable X-Band Racon*, J. S. Donal, Jr., C. P. Vogel, Radio Corporation of America, Dec. 1, 1944, OEMar-684. Div. 14-232.112-M4
- 14-416 *Dependence of Performance of Germanium Second-Detector Units on Bias and Video Load*, L. L. Boyarsky, R. N. Smith, A. W. McDonald, Purdue University, Mar. 28, 1945, OEMar-362. Div. 14-233.111-M14
- 14-417 *Government Radar Patent Program, Technical Report No. 6, Fundamental Radar Systems*, J. C. Batchelor, Division 14, NDRC, Mar. 1, 1945.
- 14-418 *Radar Scanner Development Program, Progress Report, September 1 to November 1, 1944*, T. I. Moseley, Dalmo Victor, Inc., December 30, 1944, OEMar-960. Div. 14-234.323-M3
- 14-419 *Radar Scanner Development Program, Progress Report, November 1, 1944 to January 1, 1945*, T. I. Moseley, Dalmo Victor, Inc., Jan. 12, 1945, OEMar-960. Div. 14-234.323-M3
- 14-420 *Project Report, Division 14 Radar, NDRC*, Apr. 1, 1945. Div. 14-501-M11
- 14-421 No report.
- 14-422 *Special Protective Coatings, Monthly Summary*, P. L. Salzberg, G. D. Patterson, G. T. Vaala, E. I. du Pont de Nemours and Company, Mar. 14, 1945, OEMar-1199. Div. 14-132-M2
- 14-423 *Final Report Covering Development Work Done on High-Power S-Band Magnetron (HP-10F) and Series Gaps*, T. H. Rogers, Machlett Laboratories, Inc., Apr. 1, 1945, OEMar-1146. Div. 14-232.19-M13
- 14-424 *Development of a High-Impedance Radio-Frequency Transmission Line*, B. H. Maddeck, Federal Telephone and Radio Corporation, Jan. 13, 1945, OEMar-1283. Div. 14-233.413-M7
- 14-425 *Tables of Dielectric Materials, Volume II*, A. von Hippel, Laboratory for Insulation Research, Massachusetts Institute of Technology, June 1945, OEMar-191. Div. 14-131.1-M3
- 14-426 *Special Protective Coatings, Monthly Summary*, G. D. Patterson, G. T. Vaala, E. I. du

CONFIDENTIAL

- Pont de Nemours and Company, May 12, 1945, OEMsr-1199. Div. 14-132-M2
- 14-427 *K-Band Germanium Crystals, Final Report*, H. Q. North, General Electric Company, Mar. 26, 1945, OEMsr-1377. Div. 14-233.111-M13
- 14-428 *Burnout of X-Band Video Crystals*, R. H. Vought, B. Serin, W. K. Meyerhof, University of Pennsylvania, Apr. 10, 1945, OEMsr-388. Div. 14-241.51-M2
- 14-429 *Final Report on H-K Roll-Stabilized Scanner*, W. M. Cady, Radiation Laboratory, Massachusetts Institute of Technology, Maguire Industries, Inc., April 1945, OEMsr-1291. Div. 14-234.326-M3
- 14-430 *Government Radar Patent Program, Technical Report No. 5 R-F Components*, J. C. Batchelor, Division 14, NDRC, Mar. 23, 1945.
- 14-431 *Final Report on the Development of Magnetron Generators of High-Power and of Short Wavelengths*, J. B. Fisk, Western Electric Company, Jan. 10, 1942, NDCrc-174. Div. 14-232.113-M3
- 14-432 *A 3,000-Mc Receiver Using Velocity-Modulation Tubes Type ZP-439, Final Report*, E. B. Hannell, General Electric Company, Sept. 23, 1941, OEMsr-8.
- 14-433 *The Fairchild Central-Station Computer, Part I, The Fairchild .50 Caliber M2 Computer and AGS Adaptations for an Emerson Tilt Turret, Part II, Final Report*, R. B. Trimble, supervisor, Fairchild Camera and Instrument Corporation, Apr. 30, 1945, OEMsr-812. Div. 14-323.12-M6
- 14-434 *Development Work on AN/PPN-2 Radio Set, Summary Report*, D. H. Mitchell, Galvin Manufacturing Corporation, Apr. 6, 1945, OEMsr-918. Div. 14-328.113-M4
- 14-435 *Electronic Computers for Division, Multiplication, Squaring, etc., VAC-4*, H. S. Sack, A. C. Beer, H. W. Boehmer, Cornell University, Aug. 7, 1944, OEMsr-768. Div. 14-112-M3
- 14-436 *A Mechanical Integrating System Incorporating a Magnetic Amplifier, MA-2*, J. W. Trischka, H. S. Sack, Cornell University, Dec. 15, 1944, OEMsr-768. Div. 14-329.142-M2
- 14-437 *Use of a Specially Designed Magnetic Amplifier in Computing Circuits*, H. S. Sack, R. T. Beyer, G. Miller, J. W. Trischka, Cornell University, May 10, 1945, OEMsr-768. Div. 14-211.4-M4
- 14-438 *High-Power Series Gaps, Bimonthly Report for March and April, 1945*, F. S. Goucher, Bell Telephone Laboratories, Western Electric Company, May 7, 1945, OEMsr-1409. Div. 14-231.21-M5
- 14-439 *Notes on the Accurate Measurement of Small Attenuations at Microwaves*, J. Kbert, PIB-43, Polytechnic Institute of Brooklyn, Apr. 5, 1945, OEMsr-335. Div. 14-251.1-M7
- 14-440 *Project Report*, Division 14, NDRC, June 1, 1945. Div. 14-501-M11
- 14-441 *Germanium Crystal Rectifier for Radar Receivers and Indicator Circuits, Interim Report No. 3*, H. C. Theuerer, J. H. Scaff, Bell Telephone Laboratories, Western Electric Company, Mar. 13, 1945, OEMsr-1408. Div. 14-233.111-M11
- 14-442 *Development and Construction of Equation Solvers for GCI and SCI Radar Trainers, Technical Report Reviewing the History*, R. L. Russell, Wilcox & Gibbs Sewing Machine Company, Feb. 14, 1945, OEMsr-1091. Div. 14-411.5-M5
- 14-443 *Transformer Model Shop, Final Report*, R. S. Quimby, Raytheon Manufacturing Company, Mar. 12, 1945, OEMsr-589. Div. 14-211.4-M3
- 14-444 *K-Band Magnetron, Technical Report*, L. Malter, RCA Victor Division, Radio Corporation of America, Mar. 1, 1945, OEMsr-1043. Div. 14-232.111-M8
- 14-445 *Performance and Stability of Triggered Gases*, K. H. Moore, Rensselaer Polytechnic Institute, May 4, 1945, OEMsr-781. Div. 14-212.7-M5
- 14-446 *Supersonic Loran Trainer, Final Report*, J. F. Marshall, R. P. Shutt, P. B. Wiesz, B. L. Miller, P. Hough, Bartol Research Foundation, The Franklin Institute, June 4, 1945, OEMsr-1220. Div. 14-411.5-M6
- 14-447 *Pulse Transformers, Final Report*, J. W. Dunlison, Utah Radio Products Company, June 14, 1945, OEMsr-1269. Div. 14-211.41-M12
- 14-448 *Special Protective Coatings, Monthly Progress Report*, P. L. Salzberg, Chemical Department, E. I. du Pont de Nemours and Company, June 14, 1945, OEMsr-1199. Div. 14-132-M2
- 14-449 *Radio Set AN/MPN-1, NE-1, Ground-Controlled Approach (GCA) Radar, Technical Report*, K. L. Mealey, Gilfillan Brothers, Inc., June 15, 1945, OEMsr-663. Div. 14-325.1-M4
- 14-450 *Magnetrons and Detector Beat-Oscillator Receivers with Record of Material Furnished*, A. J. Snyder, Bell Telephone Laboratories, Western Electric Company, June 1945, NDCrc-175. Div. 14-232.113-M9
- 14-451 *U. S. Radar Survey, Section 3, Ground Radar, Change 1*, Office of the Secretary, Division 14, NDRC, June 1, 1945. Div. 14-310.1-M1
- 14-452 *Special Protective Coatings, Monthly Summary*, P. L. Salzberg, Chemical Department, E. I. du Pont de Nemours and Company, Apr. 13, 1945, OEMsr-1199. Div. 14-132-M2
- 14-453 *High-Voltage Voltage Silica*, M. N. Lewis, J. H. Taylor, R. J. Gibson, W. E. Stephens, University of Pennsylvania, June 28, 1945, OEMsr-388. Div. 14-233.112-M20
- 14-454 *Transformer Model Shop at Sharon, Pa., Final Report*, W. A. Sumner, Westinghouse Electric and Manufacturing Company, June 25, 1945, OEMsr-1239. Div. 14-211.4-M5
- 14-455 *U. S. Radar Survey, Section 4, Navigational*

CONFIDENTIAL

- Radar, Change 1, Office of the Secretary, Division 14, NDRC, June 15, 1945.*
- 14-456 *N-Band Crystal Video Performance with Bias*, W. E. Meyerhof, B. Serin, R. H. Yought, University of Pennsylvania, July 6, 1945, OEMsr-388. Div. 14-241.51-M3
- 14-457 *The Investigation of the Effect of Manufacturing and Test-Equipment Variables on the N-Band Characteristics of Bell System Thermistors*, J. B. Stucky, Jr., Bell Telephone Laboratories, Western Electric Company, June 19, 1945, OEMsr-1212. See Div. 14-252.42-M4
- 14-458 *An Improved Type of L-F Loran Transmitter*, Approved by Stuart W. Seeley, RCA License Laboratory, Radio Corporation of America, June 29, 1945, OEMsr-977. Div. 14-327.112-M6
- 14-459 *An Exciter for L-F Loran Transmitter*, Approved by Stuart W. Seeley, RCA License Laboratory, Radio Corporation of America, June 8, 1945, OEMsr-977. Div. 14-327.112-M5
- 14-460 *Precision Measurement of Wave Guide Discontinuities*, S. C. Snowden, W. H. Pickering, D. W. Hagelbarger, California Institute of Technology, July 1945, OEMsr-1311. Div. 14-233.423-M10
- 14-461 *A New and Practical Method for Matching Two Obstacles in a Wave Guide*, S. C. Snowden, D. W. Hagelbarger, California Institute of Technology, July 1945, OEMsr-1311. Div. 14-233.412-M19
- 14-462 *Investigation of the Effect of Manufacturing and Test-Equipment Variables on the N- and K-Band Characteristics of Bell System Thermistors, Final Report*, J. B. Stucky, Jr., Bell Telephone Laboratories, Western Electric Company, July 30, 1945, OEMsr-1212. Div. 14-252.42-M4
- 14-463 *Project Report, Supplement*, Division 14, NDRC, July 1, 1945. Div. 14-501-M12
- 14-464 *Special Protective Coatings, Monthly Summary*, P. L. Salzberg, Chemical Department, E. I. du Pont de Nemours and Company, July 12, 1945, OEMsr-1199. Div. 14-132-M2
- 14-465 *U. S. Radar Survey, Section 6, Test Equipment, Change 1, Office of the Secretary, Division 14, NDRC, May 15, 1945.* Div. 14-251-M1
- 14-466 *Electromagnetic Theory, Final Report*, R. C. Gidds, Cornell University, July 1, 1945, OEMsr-429. Div. 14-501-M14
- 14-467 *Special Protective Coatings, Semiworks-Scale Preparation of Machine-Sprayed Film (NY)*, November 11, 1944, to January 20, 1945, B. Graham, Chemical Department, E. I. du Pont de Nemours and Company, OEMsr-1199. Div. 14-132-M3
- 14-468 *High-Power Series Gaps, Bimonthly Report*, F. S. Goucher, Bell Telephone Laboratories, Western Electric Company, July 9, 1945, OEMsr-1409. Div. 14-231.21-M5
- 14-469 *Special Protective Coatings, Formulation Studies—Exploratory Work for New Uses*, XIV, September 1, 1944, to January 1, 1945, B. C. Pratt, Chemical Department, E. I. du Pont de Nemours and Company, OEMsr-1199. Div. 14-132-M3
- 14-470 *Special Protective Coatings, Laboratory Study of Adhesive Systems, XVII, December 14, 1943, to April 1, 1945*, W. A. Hoffman, E. I. du Pont de Nemours and Company, OEMsr-1199. Div. 14-132-M3
- 14-471 *Development of a Power Output Tube for NDRC Microwave Section Project 3, Final Report*, R. B. Ayer, RCA Victor Division, Radio Corporation of America, July 26, 1945, NDCre-74. Div. 14-231.4-M6
- 14-472 *Tests on Additional Modified Type N Connectors*, J. Griemsmann, L. Nadler, Polytechnic Institute of Brooklyn, Mar. 21, 1945, OEMsr-335. Div. 14-233.422-M12
- 14-473 *Influence of Inner Waveguide Dimensions on Broad-Band Performance of Calibrated Attenuators*, A. B. Giordano, Polytechnic Institute of Brooklyn, Mar. 31, 1945, OEMsr-335. Div. 14-251.1-M5
- 14-474 *Use of Sauerbrey for Cementing Metallized-Glass Resistor Plates, Preliminary Report*, J. Ebert, Polytechnic Institute of Brooklyn, Apr. 11, 1945, OEMsr-335. Div. 14-251.1-M8
- 14-475 *A Method of Sampling a Slowly Convergent Series*, A. K. Laemmel, Polytechnic Institute of Brooklyn, Apr. 5, 1945, OEMsr-335. Div. 14-112-M5
- 14-476 *N-Band Slotted Section Test Equipment, Memorandum*, J. W. E. Griemsmann, Polytechnic Institute of Brooklyn, Apr. 25, 1945, OEMsr-335. Div. 14-252.1-M7
- 14-477 *Frequency Sensitivity of Metallized-Glass Attenuator Inserts Type TMS-4 PB*, H. C. Nelson, Polytechnic Institute of Brooklyn, May 11, 1945, OEMsr-335. Div. 14-251.1-M9
- 14-478 *Modifications Pertaining to Specifications for Glass Parts of PIB Type V-3 Variable Attenuator, PIB-11*, H. W. Schluening, Polytechnic Institute of Brooklyn, June 2, 1945, OEMsr-335. Div. 14-251.1-M15
- 14-479 *Metallized-Glass Plate Program at PIB, Research Conference*, Ernst Welser, Polytechnic Institute of Brooklyn, May 22, 1945, OEMsr-335. Div. 14-251.1-M11
- 14-480 *Accuracy of Attenuation Measurements Made with the Ballantine Voltmeter*, H. C. Nelson, Polytechnic Institute of Brooklyn, May 30, 1945, OEMsr-335. Div. 14-251.1-M13
- 14-481 *Microwave Resistance Comparator*, J. Ebert, Polytechnic Institute of Brooklyn, May 22, 1945, OEMsr-335. Div. 14-251.1-M12
- 14-482 *Frequency Sensitivity of Metallized-Glass Attenuator Inserts Type TMS-3 PB*, H. C. Nelson, Polytechnic Institute of Brooklyn, May 20, 1945, OEMsr-335. Div. 14-251.1-M10
- 14-483 *The TMS-14 PB Metallized-Glass Plate for Variable N-Band Attenuator, Maxbaum 25-db*

CONFIDENTIAL

- A. B. Giordano, Polytechnic Institute of Brooklyn, June 2, 1945, OEMar-335.
Div. 14-251.1-M16
- 14-484 *The TMX-10 PB Metallized-Glass Plate for X-Band Fixed Attenuator, 25 db*, A. B. Giordano, Polytechnic Institute of Brooklyn, June 2, 1945, OEMar-335.
Div. 14-251.1-M17
- 14-485 *The TMX-24 PB Metallized-Glass Plate for X-Band Fixed Attenuator Pads for 10-db and 15-db*, A. B. Giordano, Polytechnic Institute of Brooklyn, June 26, 1945, OEMar-335.
Div. 14-251.1-M18
- 14-486 *A Resistive Variable Attenuator for K-Band with 40-db Maximum Attenuation*, J. Ebert, S. Johnson, Polytechnic Institute of Brooklyn, May 31, 1945, OEMar-335.
Div. 14-251.1-M14
- 14-487 *Electrical Performance of Metallized-Glass Attenuators for TS-447/UP in Extended X-Band*, A. B. Giordano, Polytechnic Institute of Brooklyn, July 6, 1945, OEMar-335.
Div. 14-251.1-M19
- 14-488 *High-Power Series Gaps Having Sintered Iron Sponge Mercury Cathodes*, F. S. Goucher, J. R. Haynes, E. J. Ryder, Bell Telephone Laboratories, Western Electric Company, Oct. 1, 1945, OEMar-1409.
Div. 14-231.21-M9
- 14-489 *Project Report*, Division 14, NDRC, Aug. 1, 1945.
Div. 14-501-B12
- 14-490 *Techniques and Calculations Used in Dielectric Measurements on Shorted Lines IX*, W. B. Westphal, Laboratory for Insulation Research, Massachusetts Institute of Technology, August 1945, OEMar-191.
Div. 14-131.2-M2
- 14-491 *Special Protective Coatings, Monthly Summary and Informal Monthly Progress Report*, P. L. Salzberg, Chemical Department, E. I. du Pont de Nemours & Company, Aug. 13, 1945, OEMar-1199.
Div. 14-132-M2
- 14-492 *Development of the Skiatron Cathode-Ray Tube for Projection Indicator, Progress Report No. 4*, L. E. Swedlund, RCA Victor Division, Lancaster, Radio Corporation of America, July 12, 1945, NDCE-150.
Div. 14-242.22-M3
- 14-493 *Double Triggering and Voltage Inducing for Series Gaps*, BL-R-929-2G-13, H. J. Sullivan, Westinghouse Electric & Manufacturing Company, Bloomfield, N. J., May 22, 1945, OEMar-709.
Div. 14-231.21-M6
- 14-494 *Development of Series Spark Gaps, Final Report*, BL-R-929-2C-14, E. G. F. Arnott, Westinghouse Electric & Manufacturing Company, Bloomfield, N. J., July 12, 1945, OEMar-709.
Div. 14-231.21-M7
- 14-495 *Aircraft Radar Equipment, Handbook of Maintenance Instructions for R-F Head for Army-Navy Model RT-63/APS British Model 110DB/206*, K-Band RF Head, U. S. Army and Navy Departments and the Air Council of the United Kingdom, [O. H. Biggs, Sylvania Electric Products Inc., Salem, Mass.], Mar. 10, 1945, OEMar-1186.
Div. 14-233.2-M2
- 14-496 *Development and Production of 50 K-Band R-F Heads, Army-Navy Model RT-63/APS, British Model 110DB/206*, Sylvania Electric Products Inc., July 6, 1945, OEMar-1186.
Div. 14-233.2-M3
- 14-497 *Development of Gun-Fire Control System Mark 56, Final Report*, L. R. Lee, Technical Representative, General Electric Company, OEMar-1299.
- 14-498 *Research and Development Leading to New and Improved Radar Indicators, Final Report*, H. W. Leverenz, RCA Laboratories, Princeton, N. J., Radio Corporation of America, NDCE-150, June 30, 1945.
Div. 14-242.2-M3
- 14-499 *Handy Guide to Crystal Types III*, W. E. Stephens, University of Pennsylvania, Sept. 25, 1945, OEMar-388.
Div. 14-233.1-M5
- 14-500 *Operations of the Project Tube Shop, November 1944 to December 1944*, N. E. Prylak, RCA Victor Division, Harrison, N. J., Radio Corporation of America, [December 1944], OEMar-477.
Div. 14-232.111-M6
- 14-501 *Development Research on X-Band Video Crystals*, W. E. Meyerhof, University of Pennsylvania, Sept. 11, 1945, OEMar-388.
Div. 14-241.51-M4
- 14-502 *Special Protective Coatings, Monthly Summary and Informal Progress Report*, P. L. Salzberg, E. I. du Pont de Nemours & Company, Sept. 14, 1945, OEMar-1199.
Div. 14-132-M2
- 14-503 *Advanced Design for Radar Photography with Drawings*, P. T. E. Nevius, I. W. Doyle, Fairchild Camera and Instrument Corporation, July 20, 1945, OEMar-1358.
Div. 14-264-M8
- 14-504 *Double Valued Characteristics of Crystal Rectifiers, Comments*, B. Goodman, University of Pennsylvania, Sept. 18, 1945, OEMar-388.
Div. 14-233.134-M5
- 14-505 *Temperature Effects of S-Band Video Crystals*, A. Smith, W. E. Stephens, University of Pennsylvania, Sept. 20, 1945, OEMar-388.
Div. 14-241.52-M2
- 14-506 *Heat Treatment of Germanium Rectifier Materials, Interim Report No. 4*, H. C. Theuerer, J. H. Scaff, Bell Telephone Laboratories, Western Electric Company, Aug. 3, 1945, OEMar-1408.
Div. 14-233.111-M15
- 14-507 *Components of CNHR, SCI, Equipment, Final Report*, C. C. Lasher, General Electric Company, Sept. 30, 1945, OEMar-1394.
Div. 14-322.2-M4
- 14-508 *Special Protective Coatings, Final Report XXV, December 1, 1943, to September 30, 1945*, B. C. Pratt, E. I. du Pont de Nemours & Company, OEMar-1199.
Div. 14-132-M3
- 14-509 *Cathode-Ray Tube Screen Development*, A. B. Steadman, S. J. Koch, P. S. Christaldi, Allen B. Du Mont Laboratories Inc., Sept. 14, 1945, OEMar-1141.
Div. 14-242.233-M4
- 14-510 No report.

CONFIDENTIAL

- 14-511 Na report.
- 14-512 *D-C Resolvers, DCR-2*, H. S. Sack, R. N. Work, Cornell University, Oct. 6, 1945, OEMsr-768. Div. 14-212.61-M2
- 14-513 *A-C Potential Equalizers and Phase Sensitive Detectors, ACE-2*, H. S. Sack, A. A. Oliner, Cornell University, Oct. 26, 1945, OEMsr-768. Div. 14-212.8-M8
- 14-514 *Cathode-Coating Resistance as Measured by Embedded Probes*, W. E. Danforth, Bartol Research Foundation, The Franklin Institute, Oct. 31, 1945, OEMsr-358. Div. 14-232.143-M6
- 14-515 *Secondary Electron Emission from Oxide-Coated Cathodes*, M. A. Pomerantz, Bartol Research Foundation, The Franklin Institute, Oct. 15, 1945, OEMsr-358. Div. 14-232.141-M5
- 14-516 *Sparking Phenomena in High Vacuum Thermionic Tubes, General Survey*, W. E. Ramsay, Bartol Research Foundation, The Franklin Institute, Oct. 31, 1945, OEMsr-358. Div. 14-232.143-M7
- 14-517 *Sintered Thorium Cathodes*, M. A. Pomerantz, Bartol Research Foundation, The Franklin Institute, Oct. 31, 1945, OEMsr-358. Div. 14-232.142-M2
- 14-518 *Effect of Particle Size*, C. D. Prater, Bartol Research Foundation, The Franklin Institute, Oct. 31, 1945, OEMsr-358. Div. 14-232.141-M6
- 14-519 *Purification of Barium & Strontium Carbonates*, C. D. Prater, Bartol Research Foundation, The Franklin Institute, Oct. 31, 1945, OEMsr-358. Div. 14-232.141-M6
- 14-520 *A Note on Nitrocellulose Binders*, C. D. Prater, Bartol Research Foundation, The Franklin Institute, Oct. 31, 1945, OEMsr-358. Div. 14-232.141-M6
- 14-521 *Precision-Metallization of Glass*, H. W. Schleuning, Polytechnic Institute of Brooklyn, Oct. 31, 1945, OEMsr-335. Div. 14-251.1-M20
- 14-522 *Fixed-Value Metallized-Glass Coaxial Attenuators*, E. Weber, Polytechnic Institute of Brooklyn, Oct. 31, 1945, OEMsr-335. Div. 14-251.1-M21
- 14-523 *Variable Metallized-Glass Coaxial Attenuators*, S. A. Johnson, Polytechnic Institute of Brooklyn, Oct. 31, 1945, OEMsr-335. Div. 14-251.1-M22
- 14-524 *Metallized-Glass Bolometers*, S. A. Johnson, Polytechnic Institute of Brooklyn, Oct. 31, 1945, OEMsr-335. Div. 14-252.41-M8
- 14-525 *The Development of Metallized-Glass Attenuating Elements for X-Band Waveguide*, J. E. Ebert, Polytechnic Institute of Brooklyn, Oct. 31, 1945, OEMsr-335. Div. 14-251.1-M23
- 14-526 *Metallized-Glass Waveguide Attenuators*, J. E. Ebert, Polytechnic Institute of Brooklyn, Oct. 31, 1945, OEMsr-335. Div. 14-251.1-M24
- 14-527 *The Development of Metallized-Glass Attenuators for Test Set TS-147/UP*, E. Weber, Polytechnic Institute of Brooklyn, Oct. 31, 1945, OEMsr-335. Div. 14-251.1-M25
- 14-528 *R-F Components for Microwave Bridges*, A. Laemmel, Polytechnic Institute of Brooklyn, Oct. 31, 1945, OEMsr-335. Div. 14-233-M4
- 14-529 *Microwave Power Measurement with Bolometers*, E. Peskin, Polytechnic Institute of Brooklyn, Oct. 31, 1945, OEMsr-335. Div. 14-252.41-M9
- 14-530 *Type N Connector Design and Tests*, J. W. E. Griemsmann, Polytechnic Institute of Brooklyn, Oct. 31, 1945, OEMsr-335. Div. 14-233.422-M14
- 14-531 *Microwave Attenuation Standards*, A. R. Gior-dano, Polytechnic Institute of Brooklyn, Oct. 31, 1945, OEMsr-335. Div. 14-251.1-M26
- 14-532 *Microwave Attenuation Measurement*, E. Weber, Polytechnic Institute of Brooklyn, Oct. 31, 1945, OEMsr-335. Div. 14-251.1-M27
- 14-533 *Development of Miscellaneous R-F Line Components*, S. A. Johnson, J. W. E. Griemsmann, Polytechnic Institute of Brooklyn, Oct. 31, 1945, OEMsr-335. Div. 14-233-M5
- 14-534 *Precision Metallized-Glass Resistor Units*, H. W. Schleuning, Polytechnic Institute of Brooklyn, Oct. 31, 1945, OEMsr-335. Div. 14-251.1-M28
- 14-535 *Microwave Radar Field and Laboratory Test Equipment and Components, Final Report*, E. Weber, Polytechnic Institute of Brooklyn, Oct. 31, 1945, OEMsr-335. Div. 14-251.1-M29
- 14-536 *Development and Production of Tube Type H50 Hydrogen Thyatron, Final Report*, B. Helling, Kuth Laboratories, Inc., Mar. 31, 1945, OEMsr-1032. Div. 14-231.221-M6
- 14-537 *Constantan of EMF's of Dry Batteries*, H. S. Sack, Cornell University, Oct. 2, 1945, OEMsr-768. Div. 14-235.1-M7
- 14-538 *Electronic Computers for Division, Multiplication, Squaring, etc., Same Additional Remarks*, H. S. Sack, H. W. Boehmer, Cornell University, Oct. 8, 1945, OEMsr-768. Div. 14-213-M3
- 14-539 *Low Thermal Expansion Plastics*, X. A. von Hippel, S. M. Kingsbury, L. G. Wesson, Laboratory for Insulation Research, Massachusetts Institute of Technology, Oct. 1945, OEMsr-191. Div. 14-131.13-M3
- 14-540 *Titanium Ceramics II, XI*, A. von Hippel, R. G. Breckenridge, A. P. de Bretteville, Jr., J. M. Brownlow, Laboratory for Insulation Research, Massachusetts Institute of Technology, October 1945, OEMsr-191. Div. 14-131.11-M2
- 14-541 *Design of Equipment for Measurement of Dielectric Constant and Loss with Standing Waves in Waveguides, XII*, M. G. Haugen, W. B. Westphal, Laboratory of Insulation Research, Massachusetts Institute of Technology, October 1945, OEMsr-191. Div. 14-131.2-M4
- 14-542 *An Apparatus for Determining Heat-Distortion Characteristics of Plastics, XIII*, Paul F.

CONFIDENTIAL

- Ant, Laboratory for Insulation Research, Massachusetts Institute of Technology, October 1945, OEMar-191. Div. 14-131.13-M2
- 14-543 *Preliminary Oscillographic Studies of R-F Build-up in Magnetron*, XIV, G. M. Lee, of Laboratory for Insulation Research, R. C. Fletcher, of Radiation Laboratory, Massachusetts Institute of Technology, November 1945, OEMar-191. Div. 14-232.16-M14
- 14-544 *Development and Wide-Frequency Investigation of dielectrics, Final Report*, XV, A. von Hippel, Laboratory for Insulation Research, Massachusetts Institute of Technology, October 1945, OEMar-191. Div. 14-131.1-M4
- 14-545 *Magnetron Cathode Studies, Final Report*, W. F. G. Swann, Bartol Research Foundation, The Franklin Institute, Oct. 31, 1945, OEMar-358. Div. 14-232.14-M2
- 14-546 *Investigation of Circuits of Use in Precision Radar Computers, Final Report*, H. S. Sack, Cornell University, Oct. 30, 1945, OEMar-768. Div. 14-213-M4
- 14-547 *Special Protective Coatings, Surface Adjustment of Film (Use B)*, XVI, August 20, 1944, to March 29, 1945, G. T. Borchardt, Chemical Department, E. I. du Pont de Nemours & Company, [Mar. 29, 1945], OEMar-1199. Div. 14-132-M3
- 14-548 *Special Protective Coatings, Semiworks Scale Preparation of Machine-Sprayed Films*, XVII, January 1 to June 1, 1945, J. H. Baldt, Chemical Department, E. I. du Pont de Nemours & Company, OEMar-1199. Div. 14-132-M3
- 14-549 *Special Protective Coatings, Practical Application Trials (Use A)*, XIX, February 1, 1944, to April 1, 1945, C. W. Theedalt, Chemical Department, E. I. du Pont de Nemours & Company, OEMar-1199. Div. 14-132-M3
- 14-550 *Special Protective Coatings, Practical Application Trials, Laboratory Study of Adhesives (Uses B and C)*, XX, August 25, 1944, to August 31, 1945, W. A. Hoffman, Chemical Department, E. I. du Pont de Nemours & Company, OEMar-1199. Div. 14-132-M3
- 14-551 *Special Protective Coatings, Fouling Development Studies*, XXI, January 1 to August 31, 1945, E. R. Alexander, Chemical Department, E. I. du Pont de Nemours & Company, OEMar-1199. Div. 14-132-M3
- 14-552 *Special Protective Coatings, Preparation of Films by Hot Pressing*, XXII, January 20 to August 31, 1945, G. T. Borchardt, Chemical Department, E. I. du Pont de Nemours & Company, OEMar-1199. Div. 14-132-M3
- 14-553 *Special Protective Coatings, Semiworks-Scale Preparation of Machine-Sprayed Films*, XXIII, June 1 to August 31, 1945, D. Graham, Chemical Department, E. I. du Pont de Nemours & Company, OEMar-1199. Div. 14-132-M3
- 14-554 *Special Protective Coatings, Process Development Work at Newburgh*, XXIV, July 23 to August 31, 1945, J. H. Baldt, Chemical Department, E. I. du Pont de Nemours & Company, OEMar-1199. Div. 14-132-M3
- 14-555 *Preparation of High-Back Voltage Germanium Rectifiers*, J. H. Scaff, H. C. Theuerer, Bell Telephone Laboratories, Western Electric Company, Oct. 24, 1945, OEMar-1408. Div. 14-233.111-M17
- 14-556 *Radar Model Shop, Final Report*, J. W. Hinkley, Research Construction Company, Inc., Dec. 31, 1945, OEMar-164. Div. 14-501-M16
- 14-557 *General Dynamical Considerations Applied to Piezo-Electric Oscillations of Quartz Crystal in Electrical Circuit, Supplement II*, W. F. G. Swann, Bartol Research Foundation, The Franklin Institute, Oct. 1, 1945, OEMar-1220. (See NDRC 14-2718 for Supplement I.) Div. 14-422.1-M3
- 14-558 *Mass Spectrometer Investigation of the Silicon Tetrachloride Used in Making Pure Silicon*, R. H. Vought, University of Pennsylvania, Oct. 5, 1945, OEMar-388. Div. 14-233.112-M21
- 14-559 *Tests on German Crystals*, M. H. Greenblatt, University of Pennsylvania, Oct. 11, 1945, OEMar-388. Div. 14-233.1-M6
- 14-560 *Harnout Life Tests of X-Band Video Crystals*, H. Serin, University of Pennsylvania, Oct. 11, 1945, OEMar-388. Div. 14-241.51-M5
- 14-561 *Use of Different Fillers in Crystal Rectifiers*, A. H. Smith, University of Pennsylvania, Oct. 18, 1945, OEMar-388. Div. 14-233.134-M6
- 14-562 *Research and Development of Crystal Rectifiers, Final Report*, W. E. Stephens, P. H. Miller, Jr., University of Pennsylvania, Oct. 22, 1945, OEMar-388. Div. 14-233.13-M4
- 14-563 *Geometrical Structure of Silicon Surfaces*, W. E. Meyerhof, W. E. Stephens, University of Pennsylvania, Oct. 16, 1945, OEMar-388. Div. 14-233.112-M22
- 14-564 *Burnout of S-Band Video Crystals*, M. N. Lewis, University of Pennsylvania, Oct. 19, 1945, OEMar-388. Div. 14-241.52-M3
- 14-565 *Project Report, Final*, Division 14, NDRC, December 1945. Div. 14-501-M15
- 14-566 *Radar Scanning Unit, Final Report*, O. W. Schotz, Chrysler Corporation, Oct. 25, 1945, OEMar-1167. Div. 14-234.325-M4
- 14-567 *RASD Stable Element, Final Report*, R. J. Johnson, General Electric Company, Oct. 30, 1945, OEMar-1336. Div. 14-234.33-M4
- 14-568 *U. S. Radar Survey, Section 8—Airborne Radar, Change 1*, Office of the Secretary, Division 14, NDRC, Aug. 1, 1945.
- 14-569 *Development and Production Samples of APG Series (AN/APG-5 and AN/APG-8) Radar Equipment, Project Report*, L. P. Morris, Galvin Manufacturing Corporation, June 30, 1945, OEMar-672. Div. 14-323.1-M3
- Supplement, *Manuscript Handbook of Maintenance Instructions for Radio Sets AN/APG-5*

CONFIDENTIAL

- and AN/AFG-5A. Div. 14-323.11-M6
Supplement, Tests Conducted at Northwestern
University, Galvin Manufacturing Corporation,
under subcontract, OEMsr-972. Div. 14-503-M3
- 14-570 SCHIAI, AGL-1, Aircraft Fire-Control Com-
puter, D. L. Colbath, General Electric Com-
pany, Nov. 16, 1945 OEMsr-233. Div. 14-323.13-M3
- 14-571 Development of (1) High-Frequency Video
Amplifier and (2) Radar-Ranging System,
Final Report, T. P. Eckert, Jr., T. K. Sharp-
less, University of Pennsylvania, Nov. 15, 1945,
OEMsr-387. Div. 14-245-M1
- 14-572 Investigations to Prepare a Transparent
Phosphor, Final Report, G. W. Morey, Car-
negie Institution of Washington, July 31, 1945,
OEMsr-634. Div. 14-242.231-M9
- 14-573 Radar Rotating Antenna Spiral Scanning
Units, Balance and Adjustment, R. L. Hal-
berg, S. T. Foresman, Chrysler Corporation,
Nov. 27, 1945, OEMsr-1167. Div. 14-234.325-M5
- 14-574 U. S. Radar Survey, Section 7, Nomenclature
Index, Change 1, Office of the Secretary, Divi-
sion 14, NDRC, Aug. 1, 1945. (For Section 7
without Change 1, see Div. 14-510-M2.)
- 14-575 Transmission by a Slit in a Partition in a
Rectangular Waveguide, E. S. Akeley, Purdue
University, Mar. 15, 1945, OEMsr-362. Div. 14-233.412-M17
- 14-576 Further Developments in the Preparation and
Heat Treatment of Germanium Alloys, R. M.
Whaley, Purdue University, Oct. 31, 1945,
OEMsr-362. Div. 14-233.111-M18
- 14-577 Production and Performance of Germanium
High Back Voltage High Back Resistance
Crystal Rectifiers, L. Boyarsky, P. B. Pickler,
A. W. MacDonald, R. N. Smith, R. M. Whaley,
and H. J. Yearian, Purdue University, Oct.
31, 1945, OEMsr-362. Div. 14-233.111-M22
- 14-578 Dependence of Noise Temperature DC and IF
Crystal Conductance on Matching Conditions,
H. J. Yearian, Purdue University, Oct. 30,
1945, OEMsr-362. Div. 14-233.12-M9
- 14-579 Temperature Dependence of High-Voltage
Germanium Rectifier DC Characteristics, S.
Benzer, Purdue University, Oct. 31, 1945,
OEMsr-362. Div. 14-233.111-M21
- 14-580 Photoelectric Effects in Germanium, S. Benzer,
Purdue University, Oct. 31, 1945, OEMsr-362.
Div. 14-233.111-M19
- 14-581 Dependence of Forward Conductance and
Back Resistance of High-Back Voltage Ger-
manium on Voltage and Frequency, H. J.
Yearian, Purdue University, Oct. 31, 1945,
OEMsr-362. Div. 14-233.111-M20
- 14-582 Final Report on Radar Tube Model Shop, O.
H. Biggs, Sylvania Electric Products, Inc.,
Salem, Mass., Nov. 30, 1945, OEMsr-999.
Div. 14-211.6-M1
- 14-583 Index of Division 14, NDRC, Reports Other
than Radiation Laboratory Reports; First
Supplement, Division 14, NDRC, Mar. 1, 1946.
Div. 14-510-M5
- 14-584 Crystal Capacity as a Function of Bias and
Its Relation to the Theory of Crystal-Rectifi-
cation, R. N. Smith, Purdue University, Mar.
16, 1946, OEMsr-362. Div. 14-233.134-M8
- 14-585 Final Report on Crystal Developments for
Radar Receivers, K. Lark-Horowitz, Purdue
University, May 15, 1946, OEMsr-362.
Div. 14-233.134-M7
- 14-586 Method of Measurement and Some Perform-
ance Characteristics of P14 Screens with a
Note on Manufacturer's Specifications for
Tubes Containing P14 Screens, E. B. Innes,
RCA Victor Division, Radio Corporation of
America, Nov. 27, 1945, NDCre-150. Div. 14-242.231-M10
- 14-587 Final Report for Contract OEMsr-1044 May
27, 1943 to October 31, 1945—Part 1, History
of the Contract and Patent Disclosures; Part
2, Triangle Solver for Eagle Project (Delta);
Part 3, Triangle Solvers for H2X Bombing
Project (Alpha); Part 4, Triangle Solver for
Laboratory Use (Gamma) Part 5; Redesign
of Triangle Solver for Eagle Project (Beta);
Part 6, Preliminary Ballistics Computer for
a Gun-Director System (Eta); Part 7, Ballis-
tic Computer Mark 42, Mod. O (Rho); Part
8, Ballistic Computer Mark 42, Mod. 1, Ser.
No. 1; B. B. Willis and D. C. Webster; OSRD
6434; Librascope, Inc.; Oct. 31, 1945, OEMsr-
1944. Div. 14-329.131-M2
- 14-588 Magnetrons for Production of Cm. Wave-
length Radiation also Absorption of Such
Radiation in Water Vapor, Final Report,
Columbia University Radiation Laboratory,
Apr. 1, 1946, OEMsr-485. Div. 14-232.1-M8
- 14-589 Rising Sun Magnetron with Large Number of
Anode Cavities for Cm. and Mm. Wavelengths;
A. V. Hollenberg, N. Kroll and S. Millman;
Columbia University Radiation Laboratory;
May 10, 1946; OEMsr-485. Div. 14-232.111-M9
- 14-590 Development of the SB-511, SB-511B and
SB-516 Triodes for Pulsed and CW Operation
at Microwave Frequency, M. A. Acheson, Syl-
vania Electric Products, Inc., May 8, 1946,
OEMsr-988. Div. 14-211.62-M1
- 14-591 Transformer Model Shop, Final Report, H.
W. Lord, R. H. Johnson, P. C. Edwards, B. F.
Slye, General Electric Company, Apr. 23, 1946,
OEMsr-582. Div. 14-211.4-M6
- 14-592 Development and Use of the Microband Lock-
In Amplifier, G. A. Rossetto, Georgia School of
Technology, September 1945, OEMsr-344. Div. 14-241.3-M6
- 14-593 The Resonator Ultrahigh-Frequency Oscil-
lator, September 1, 1940 to June 30, 1942,
Progress Reports and Final Report, L. C.
Marshall, University of California, Apr. 10,
1946, NDCre-25. Div. 14-232.3-M1

CONFIDENTIAL

- 14-594 *Broad-Band TR-Tube Development*, M. D. Fiske, H. N. Wallace, A. D. Warner, General Electric Company, Nov. 7, 1945, OEMar-1306, Div. 14-329.15-M11

Miscellaneous Microfilmed Reports Related to Division 14 Projects

ARMY, U. S.

- Shoran, a New Type of Radar System for High-Precision Position-Finding in Aerial Navigation*, AN/APN-3, AN/CPN-2, Serial No. 58, RCA Laboratories, Industrial Service Division, Radio Corporation of America, W-535-se-671, July 1944.

Div. 14-237.2-M1

- A Simplified Method of Sighting and Releasing Bombs from Airplanes*, H. S. Morton, U. S. Army, Ordnance Department, Feb. 13, 1943.

Div. 14-329.143-M1

- General Technique for Bombing Stationary or Moving Targets*, H. S. Morton, U. S. Army, Ordnance Department, Feb. 22, 1943.

Div. 14-329.17-M1

- Mathematical Study of the Timing Function of the Acceleration Integrator*, H. S. Morton, U. S. Army, Ordnance Department, Feb. 25, 1943.

Div. 14-329.18-M1

- Preliminary Mathematical Analysis of Tone-Bombing*, H. S. Morton, U. S. Army, Ordnance Department, Apr. 1, 1943.

Div. 14-329.17-M2

- Gun Climb, Harmonization and Bullet Pattern*, OSRD WA-3266-1, Eighth Air Force, U. S. Army Air Forces, Nov. 12, 1944.

Div. 14-323.1-M2

- Plotting Equipment RC-294*, Technical Manual TM 11-1220, U. S. War Department, Feb. 17, 1945.

Div. 14-265.3-M2

- Method of Photo Bomb Scoring for the Radar Bombing Technique*, Plans and Analysis Section, Department of Training and Operations, Victorville, California, Apr. 1, 1945.

Div. 14-329.151-M1

- Fighter Gunnery, Rocket Firing and Dive Bombing*, Manual No. 64, U. S. Army Air Forces Fighter Gunnery School, Foster Field, Texas, May 1, 1945.

Div. 14-323.6-M6

- Special Eagle Project Accomplished at Grand Island, Army Air Field, Grand Island, Nebraska; Part I, Report; Part II, Bombing Team Training Procedures*, D. E. Baker, United States Army Air Forces, 17th Bombardment Operational Training Wing, Sioux City, Iowa, Report No. 353.41E1, May 5, 1945.

Div. 14-329.131-M1

- Statistical Reports on Radar Bombing*, C. E. Duncan, G. E. Turner, United States Army Air Forces, Colorado Springs, Colorado, May 26, 1945.

Div. 14-329.15-M2

- Bombing Accuracy of Radar Personnel of 315th and 316th Bomb Wings in Training at Victorville, California*, U. S. Army Air Forces, Statistical Control Office, [July 1945].

Div. 14-329.15-M3

- Report on Radar Training Conference, Victorville Army Air Field, Victorville, California, on July 24-25, 1945*, R. H. Lewis, U. S. Army Air Forces, Headquarters Victorville Army Air Field, Aug. 1, 1945.

Div. 14-411.1-M3

- Radar Bombing Score Analysis*, Report No. 23, B. Vinograd, U. S. Army Air Forces, Second Air Force, Operations and Training Division, Colorado Springs, Colorado, Sept. 14, 1945.

Div. 14-329.15-M4

- Final Report on Training Method and Evaluation of the Acceleration Integrator Bomb Release*, S. H. Getz, U. S. Army Air Force Training Research and Liaison Section, Williams Field, Chandler, Arizona, Nov. 27, 1945.

Div. 14-411.4-M1

BELL TELEPHONE LABORATORIES

- Notes on Close Support Plotting Board D-170500*, Bell Telephone Laboratories, Inc., Western Electric Company, Nov. 22, 1944.

Div. 14-265.1-M2

- Supplementary Notes on Close Support Plotting Board D-170500, Part One, Electronic Pilot D-170823*, Bell Telephone Laboratories, Inc., Western Electric Company, Jan. 20, 1945.

Div. 14-265.1-M4

- Supplementary Notes on Close Support Plotting Board D-170500, Part Two, Null Voltage Test Set KS-9470*, Bell Telephone Laboratories, Inc., Western Electric Company, Jan. 20, 1945.

Div. 14-265.1-M5

- Supplementary Notes on Close Support Plotting Board D-170500, Part Three, Revised Spare Parts and Equipment List*, Bell Telephone Laboratories, Inc., Western Electric Company, Mar. 13, 1945.

Div. 14-265.1-M6

- Supplementary Notes on Close Support Plotting Board D-170500, Part Four, Variable Scale Factor Conversion Kit D-171042, Modification to Close Support Plotting Board D-171020*, Bell Telephone Laboratories, Inc., Western Electric Company, June 20, 1945.

Div. 14-265.1-M7

- Temporary Information, Close Support Plotting Board D-171020*, Bell Telephone Laboratories, Inc., Western Electric Company, June 27, 1945.

Div. 14-265.1-M8

CALIFORNIA INSTITUTE OF TECHNOLOGY

- Method of Computing Trajectories and Sighting Tables for Forward-Firing Aircraft Rockets*, (Division 3, Report No. JPC 17), L. Blitzer, L. Davis, Jr., California Institute of Technology, Feb. 30, 1944.

Div. 14-323.6-M1

- The CIT Aircraft Rocket Sight, Type 2*, (Division 3, Report No. JNC 21), H. W. Babcock, California Institute of Technology, Sept. 25, 1944.

Div. 14-323.6-M2

- Trajectories of Aircraft Rockets, 2.5" and 5.0"*, (Division 3, Report No. UBC 27), California Institute of Technology, Sept. 25, 1944.

Div. 14-323.61-M1

- Trajectories of 11.75" Aircraft Rockets*, (Division 3, Report No. UNC 30), California Institute of Technology, Nov. 17, 1944.

Div. 14-323.61-M2

- Sight Settings for 2.25", 2.5" and 5.0" Aircraft Rockets Used on SB2C-1, SB2C-1C, SB2C-3, and SB2C-4*, (Division 3, Report No. UNC 8), California Institute of Technology, Nov. 23, 1944.

Div. 14-323.6-M3

- Forward-Firing of Rockets from P-51K Aircraft*, (Division 3, Report No. JNC 26), California Institute of Technology, Feb. 10, 1945.

Div. 14-323.6-M4

CONFIDENTIAL

Principles of Rocket Firing from Aircraft, (Division 3, Report No. JNC 90), California Institute of Technology, Apr. 2, 1945. Div. 14-329.6-M5

GENERAL ELECTRIC COMPANY

APG-1 Tracking and Firing Tests (Data Folder No. 72649), J. A. Lawrence, General Electric Company, Jan. 15, 1945. Div. 14-244.1-M2

GUNNERY RESEARCH UNIT (GREAT BRITAIN)
The Stability of Blind Firing Systems, GRU/M8, Mar. 14, 1944. Div. 14-323.12-M3

IOWA UNIVERSITY

The Elements of Toss Bombing, Technical Paper REI-TMD-115, Revision 1, I. H. Swift, University of Iowa, OEMsr-769, Nov. 17, 1944. Div. 14-329.17-M10

JOINT RADIO BOARD

Meeting of Ad Hoc Committee of the Joint Radio Board, JRB-20, TAC-322 to TAC-333, F. R. Banks, Joint Radio Board, Apr. 25, 1945. Div. 14-253.3-M1

ORDNANCE DIVISION PROJECT OF THE NATIONAL BUREAU OF STANDARDS

Equations for Toss Bombing for the Horizontal Case, Assuming Acceleration is a Function of the Time, W. B. McLean, OD-TB-19, National Bureau of Standards, Aug. 31, 1944. Div. 14-329.17-M3

Toss Bombing Trajectories, F. L. Celauro, D. Fisher, OD-OAG-32, National Bureau of Standards, Sept. 6, 1944. Div. 14-329.17-M4

Effect of Changing Integrator RC Ratio to Correct for an Error in Alignment of Sight with Line of Flight, W. B. McLean, OD-SP-10, National Bureau of Standards, Oct. 26, 1944. Div. 14-329.17-M5

Analysis of Horizontal Range Error Resulting from Neglect of Pull-Up Angle, S. H. Lachenbruch, OD-SP-45, National Bureau of Standards, Nov. 7, 1944. Div. 14-329.17-M7

Use of the 100-Ft. Horizontal Error Curves for Errors of Other Magnitudes, S. H. Lachenbruch, OD-SP-46, National Bureau of Standards, Nov. 8, 1944. Div. 14-329.17-M8

General Toss Bombing Solution for the Case of a Non-Constant Acceleration, Including the Effect of the Pull-Up Angle, A. London, OD-SP-48, National Bureau of Standards, Nov. 3, 1944. Div. 14-329.17-M6

Relationships Among Important Angles in Toss Bombing Trajectories, S. H. Lachenbruch, OD-SP-49, National Bureau of Standards, Nov. 10, 1944. Div. 14-329.17-M9

Application of Toss Bombing Equipment to Torpedo Tossing, A. London, OD-SP-56, National Bureau of Standards, Nov. 28, 1944. Div. 14-329.17-M11

Correction of the Acceleration Integrator for Air Resistance, S. H. Lachenbruch, OD-SP-76, National Bureau of Standards, Jan. 12, 1945. Div. 14-329.17-M12

Tables of New & Functions and Other Related Quantities, C. P. Eve and A. London, OS-SP-77, National Bureau of Standards, Jan. 15, 1945. Div. 14-329.17-M13

New & Card Design, A. London, A. E. Willgoos, OD-SP-78, National Bureau of Standards, Jan. 17, 1945. Div. 14-329.17-M14

Rocket Tossing Theory, A. London, C. F. Eve, OD-SP-90, National Bureau of Standards, Feb. 24, 1945. Div. 14-329.17-M15

Exact Solution of Toss Bombing Equations for Circular Pull-Up, S. H. Lachenbruch, A. London, C. F. Eve, OD-SP-98, National Bureau of Standards, Mar. 23, 1945. Div. 14-329.17-M16

Range Limitations Resulting from Approximations in Toss Bombing Equations, S. H. Lachenbruch, OD-SP-105, National Bureau of Standards, Apr. 16, 1945. Div. 14-329.17-M17

Range Wind Correction for Toss Bombing, A. London, C. F. Eve, OD-SP-107, National Bureau of Standards, June 5, 1945. Div. 14-329.17-M18

& Function for Nonconstant Pull-Up Acceleration, C. F. Eve, A. London, OD-SP-123, National Bureau of Standards, July 10, 1945. Div. 14-329.17-M20

The Effect of Sight Misalignment and Angle of Attack Variation, S. H. Lachenbruch, OD-SP-131, National Bureau of Standards, July 23, 1945. Div. 14-329.17-M21

NAVAL ORDNANCE

Rocket Sights, Second Supplement to Research Technical Report No. 10, L. E. Thompson, Laboratories, Naval Ordnance Plant [The Lukas-Harold Corporation] Indianapolis, Indiana, June 30, 1945. Div. 14-323.6-M7

Toss Bombing, Research Technical Report No. 16, L. T. R. Thompson, Laboratories, Naval Ordnance Plant [The Lukas-Harold Corporation] Indianapolis, Indiana, June 30, 1945. Div. 14-329.17-M19

ROYAL AIRCRAFT ESTABLISHMENT (GREAT BRITAIN)

The Stability of Village Inn Mark I and Means of Improving It, Fire Control Section Memorandum No. 97, Report No. Arm. S. 1031/B/AAH/99, June 1944. Div. 14-323.31-M2

Notes on a Method of Obtaining Operational Stability in AGL Mark I (and) GGS Systems, Fire Control Section Memorandum No. 98, Report No. Arm. S. 1031/J/AAH/135, July 1944. Div. 14-323.31-M3

TELECOMMUNICATION RESEARCH ESTABLISHMENT (GREAT BRITAIN)

Errors Arising from the Use of a Repeater Aircraft with Oboc, TRE Report No. T-1448, WA-813-8N, Apr. 30, 1943. Div. 14-329.132-M2

Oboc, Electric Mouse, TRE Report No. T-1500, WA-829-3a, May 11, 1942. Div. 14-329.132-M1

Oboc, How It Works, TRE Report No. 41M-101/JENH, WA-986-2a, July 2, 1943. Div. 14-329.132-M3

CONFIDENTIAL

PART II

NUMERICAL INDEX OF RADIATION

LABORATORY REPORTS

Regular Reports			
RL-1 (A-1S)	<i>B-18-A Report, February 13 to July 22, 1941, E. M. McMillan, Aug. 5, 1941.</i>	RL-18 (C-6)	<i>Relation of Radar Range to Frequency and Polarization, J. A. Stratton, R. A. Hutner, Nov. 3, 1942.</i>
RL-2 (A-2S)	<i>Report on XP-61 Mock-up, F. D. Lewis, Apr. 23, 1941.</i>	RL-19 (C-7)	<i>Change of Polarization as Means of Gap Filling, R. A. Hutner, Jan. 28, 1943.</i>
RL-3 (B-1)	<i>On Conical Scanning, Mar. 24, 1941.</i>	RL-20 (C-8)	<i>Properties of the Diffracted Wave Field Intensity, R. A. Hutner, E. Lyman, Feb. 12, 1943.</i>
RL-4 (B-2)	<i>On Aircraft Radio Sight, May 14, 1941.</i>	RL-21 (C-9)	<i>Radar Height Finding, R. A. Hutner, H. Dodson, J. Gill, B. Howard, F. Parker, J. A. Stratton, Apr. 6, 1943.</i>
RL-5 (B-3)	<i>Third General Report on Section Activities, May 14, 1941 to November 14, 1941, Nov. 15, 1941.</i>	RL-22 (C-10)	<i>Transmission at Low Altitudes over Sea Water, R. A. Hutner, F. Parker, B. Howard, H. Dodson, J. Gill, Sept. 1, 1943.</i>
RL-6 (B-1S)	<i>Special Report on Data Transmission by Means of Selsyns, I. A. Getting, Nov. 6, 1941.</i>	RL-23 (C-11)	<i>Field Intensity Formulas, R. A. Hutner, H. Dodson, J. Gill, F. Parker, B. Howard, Sept. 28, 1943.</i>
RL-7 (B-2S)	<i>Special Report on Bolometer Blind-Landing System, B. Chance, D. Griggs, R. C. Raymond, Dec. 15, 1941.</i>	RL-24 (D-1)	<i>Advance Development of 3.3-Cm System, N. F. Ramsey, R. M. Alexander, S. Roberts, May 20, 1941.</i>
RL-8 (B-3S)	<i>Report on Preliminary Results with the XT-1, November 15 to December 24, 1941.</i>	RL-25 (D-2)	<i>3-Cm System Group Report, R. M. Alexander, S. Roberts, July 5, 1941.</i>
RL-9 (B-4S)	<i>Errors in Range Measurement with a Circular Sweep, Jan. 24, 1942.</i>	RL-26 (D-3)	<i>Measuring Instruments for 3 Cm, S. Roberts, R. H. Dicke, J. S. Foster, Mar. 9, 1942.</i>
RL-10 (B-5S)	<i>Improvements in the Spot-Error Indicator, Feb. 6, 1942.</i>	RL-27 (D-4)	<i>Airborne 3-Cm Radar Equipment for AI and ASV Applications, N. F. Ramsey, May 22, 1942.</i>
RL-11 (B-6S)	<i>Tuning the RP Components of a System (Lawson Technique), R. A. Dehn, Feb. 20, 1942.</i>	RL-28 (F-1)	<i>Report of the System Group, L. W. Alvarez, Jan. 30, 1941.</i>
RL-12 (B-7S)	<i>Selsyns, Apr. 1, 1942.</i>	RL-29 (F-1S)	<i>Bacon Discrimination Circuit, J. H. Buck, Nov. 15, 1941.</i>
RL-13 (C-1)	<i>Microwave Interference Patterns, J. A. Stratton, Mar. 7, 1942.</i>	RL-30 (G-1)	<i>Interim Report of the Problems and Activities of Group G, K. T. Bainbridge, Jan. 12, 1942.</i>
RL-14 (C-2)	<i>Transmission on 3,000 Mc over Sea Water, J. A. Stratton, July 14, 1942.</i>	RL-31 (G-2)	<i>Thyratron Servo Control Circuit for Spinners, J. Millman, Apr. 4, 1942.</i>
RL-15 (C-3)	<i>Transmission on 100 Mc over Sea Water, J. A. Stratton, July 14, 1942.</i>		
RL-16 (C-4)	<i>Transmission on 200 Mc over Sea Water, J. A. Stratton, July 14, 1942.</i>		
RL-17 (C-5)	<i>Transmission on 500 Mc over Sea Water, J. A. Stratton, July 14, 1942.</i>		

CONFIDENTIAL

21

- RL-32 (O-1) *Present Status of Radiation Laboratory*, L. A. DuBridge, Jan. 12, 1942. Div. 14-501-M5
- RL-33 (P-1 to 6) *Present Status of Radiation Laboratory Program*, December 9, 1943 to July 1, 1943, D. H. Ewing. Div. 14-501-M7
- RL-34 (OP-1) *Maintenance Experience with ASV Equipment*, July 27, 1942. Div. 14-310.211-M9
- RL-35 (OP-2) *Correlation of ASV Equipment with the Bombight*, B. L. Havens, D. R. Corson, July 24, 1942. Div. 14-310.211-M10
- RL-36 (R) *Roof System Reports*, August 26, 1941 to September 24, 1941. Div. 14-502-M2
- RL-37 (R-1S) *Roof System Report, Initial Development*, February 15 to April 1, 1941. Div. 14-502-M2
- RL-38 (R-2S) *Report of Operations [10-Cm Radar] on USS Semmes*, July 17, 1941. Div. 14-310.31-M1
- RL-39 (R-3S) *Navy Roof, etc.*, Aug. 26, 1941. Div. 14-501-M3
- RL-40 (R-4S) *Roof System Reports*, Aug. 26, 1941 to Sept. 24, 1941. Div. 14-502-M2
- (R-I-1) Incorporated in RL-40.
- RL-41 (R-I-2) *Regular Report on the Components Testing System*, L. B. Linford, Oct. 8, 1941. Div. 14-232.19-M4
- RL-42 (R-I-3) *Regular Report on the Components Testing System*, L. B. Linford, Nov. 12, 1941. Div. 14-232.19-M4
- RL-43 (R-I-4) *Regular Report on the Components Testing System*, D. Bagley, Dec. 17, 1941. Div. 14-231.2-M1
- (R-I-1S) Incorporated in RL-40.
- RL-44 (R-I-2S) *Special Report on Buffered Multiple Phase Box*, L. B. Linford, S. Seely, Oct. 9, 1941. Div. 14-235.1-M1
- (R-II-1) Incorporated in RL-40.
- RL-45 (R-II-2) *Regular Report on the Operation of the Screen Cage*, A. Longacre, Oct. 8, 1941. Div. 14-251.9-M1
- RL-46 (R-II-3) *Regular Report of the Advanced Development System*, L. B. Linford, Nov. 12, 1941. Div. 14-310.14-M1
- (R-III-1) Incorporated in RL-40.
- RL-47 (R-III-2) *Regular Report on Indicators and Synchronizers*, R. E. Meagher, Oct. 15, 1941. Div. 14-232-M4
- RL-48 (R-III-3) *Regular Report on Indicators and Synchronizers*, R. E. Meagher, Nov. 19, 1941. Div. 14-242-M5
- RL-49 (R-III-4) *Indicators and Synchronizers*, R. E. Meagher, E. C. Pollard, Dec. 24, 1941. Div. 14-242-M6
- (R-IV-1) No report.
- (R-IV-2) Incorporated in RL-40.
- (R-IV-3) Incorporated in RL-40.
- RL-50 (R-IV-4) *Regular Report on the USS Semmes 3,000-Mc Operations*, Oct. 1, 1941. Div. 14-310.31-M2
- RL-51 (R-IV-5) *Regular Report on the USS Semmes 3,000-Mc Operations*, R. M. Emberson, Nov. 5, 1941. Div. 14-310.31-M2
- RL-52 (R-IV-6) *Regular Report on the USS Semmes 3,000-Mc Operations*, R. M. Emberson, Dec. 10, 1941. Div. 14-310.31-M2
- (R-V-1) Incorporated in RL-40.
- RL-53 (R-V-2) *Regular Report on the X-JO-3*, J. F. Koehler, Oct. 1, 1941. Div. 14-242.3-M1
- (R-V-3) No report. (Group Report) see Supplement to RL-417.
- RL-54 (R-V-4) *Regular Report on the X-JO-3*, J. F. Koehler, Nov. 5, 1941. Div. 14-242.3-M1
- RL-55 (R-V-5) *Regular Report on the Navy Dirigible K-3*, E. S. Hudspeth, Dec. 10, 1941. Div. 14-310.211-M4
- (R-VI-1) Incorporated in RL-40.
- RL-56 (R-VI-2) *Regular Report on Spinners and Radiators*, R. G. Herb, Oct. 15, 1941. Div. 14-234.6-M1
- RL-57 (R-VI-3) *Regular Report on Spinners and Radiators*, Nov. 26, 1941. Div. 14-234.6-M2
- (R-VII-1) Incorporated in RL-40.
- RL-58 (R-VII-2) *Regular Report on the XT-3, The 10-Cm Truck System*, S. Seely, Oct. 22, 1941. Div. 14-310.11-M1
- RL-59 (R-VII-3) *Regular Report on the XT-3*, Nov. 26, 1941. Div. 14-310.11-M2
- (R-VIII-1) Incorporated in RL-40.
- RL-60 (R-VIII-2) *Regular Report on the Maintenance Group*, Oct. 22, 1941. Div. 14-501-M4
- RL-61 (R-VIII-3) *Regular Report on the Maintenance Group*, R. H. Schuman, Nov. 26, 1941. Div. 14-501-M4
- (R-IX-1) Incorporated in RL-40.
- RL-62 (R-IX-2) *Regular Report on the B-24*, Oct. 29, 1941. Div. 14-310.211-M1
- RL-63 (R-IX-3) *10-Cm ASV Equipment on LB 30 Airplanes*, D. L. Hagler, June 2, 1942. Div. 14-310.211-M8
- (R-X-1) Incorporated in RL-40.
- RL-64 (R-X-2) *Regular Report on the PRM-1*, R. G. Herb, Oct. 29, 1941. Div. 14-310.211-M2
- RL-65 (R-X-3) *Regular Report on the CXRH-1, (PBM-1)* J. F. Koehler, Dec. 3, 1941. Div. 14-310.211-M3
- RL-66 (I-1) *Pulsers*, Dec. 2, 1940. Div. 14-231.4-M1
- RL-67 (I-2) *Pulsers*, Dec. 27, 1940. Div. 14-231.4-M1
- RL-68 (I-3) *Pulsers*, Feb. 1, 1941. Div. 14-231.4-M1
- RL-69 (I-4) *Modulators and Synchronizers*, Mar. 25, 1941. Div. 14-231-M1

CONFIDENTIAL

RL-70 (I-5)	<i>Modulators</i> , May 11, 1941. Div. 14-231-M2	RL-91 (III-1)	<i>Report of Parabola Section</i> , Dec. 2, 1940. Div. 14-501-M1
RL-71 (I-6)	<i>Report of the Modulator Group</i> , July 31, 1941. Div. 14-231-M3	RL-92 (III-2)	<i>Report of Parabola Section</i> , Dec. 16, 1940. Div. 14-501-M1
RL-72 (I-7)	<i>Regular Report of Modulator Group</i> , Nov. 4, 1941. Div. 14-231-M4	RL-93 (III-3)	<i>Report of Parabola Section</i> , Jan. 22, 1941. Div. 14-501-M1
RL-73 (I-8)	<i>Peak Currents from Carburized Thoriated Tungsten Cathodes</i> , W. H. Bostick, Mar. 20, 1942. Div. 14-232.142-M1	RL-94 (III-4)	<i>Antenna Group</i> , Feb. 14, 1941. Div. 14-234-M1
RL-74 (I-1S)	<i>Instruction Manual Browning Type A Synchronizer</i> , F. J. Gaffney, Oct. 29, 1941. Div. 14-251-8-M1	RL-95 (III-5)	<i>Report of the Antenna Group</i> , Mar. 12, 1941. Div. 14-234-M1
RL-75 (I-2S)	<i>Report of Activities of Synchronizer Section</i> , F. J. Gaffney, C. G. Montgomery, P. D. Bales, Nov. 5, 1941. Div. 14-251-8-M2	RL-96 (III-6)	<i>Report of the Antenna Group</i> , May 1, 1941. Div. 14-234-M1
RL-76 (I-3S)	<i>Test Set for Raytheon Service Modulator, Instructions for Operation and Testing</i> , P. D. Bales, Nov. 5, 1941. Div. 14-231.4-M2	RL-97 (III-7)	<i>Report of the Antenna Group</i> , July 1, 1941. Div. 14-234-M1
RL-77 (I-4S)	<i>R-F Envelope Indicator Instruction Manual</i> , F. G. Dunnington, H. D. Doolittle, Dec. 10, 1941. Div. 14-251.9-M2	RL-98 (III-8)	<i>Antenna Design and Pattern</i> , L. C. Van Alta, Jan. 6, 1942. Div. 14-234.22-M2
RL-78 (I-5S)	<i>Instruction Manual for Raytheon Service Modulator WAX-3587A</i> , H. J. Hall, Dec. 18, 1941. Div. 14-231.4-M3	RL-99 (III-10)	<i>A Study of Fanned Beam Radiators</i> , T. J. Keary, Feb. 20, 1942. Div. 14-234.326-M1
RL-79 (II-1)	<i>Transmitting Tube Section</i> , Dec. 2, 1949. Div. 14-232.113-M1	RL-100 (IV-1)	<i>Receivers</i> , Dec. 2, 1940. Div. 14-241-M1
RL-80 (II-2)	<i>Transmitting Tube Section</i> , Dec. 17, 1940. Div. 14-232.113-M1	RL-101 (IV-2)	<i>Receivers</i> , Dec. 20, 1940. Div. 14-241-M2
RL-81 (II-3)	<i>Transmitting Tube Section</i> , Jan. 13, 1941. Div. 14-232.113-M1	RL-102 (IV-3)	<i>Receivers and TR Boxes</i> , Feb. 4, 1941. Div. 14-241-M3
RL-82 (II-4)	<i>Transmitting Tube Section</i> , Jan. 28, 1941. Div. 14-232.113-M1	RL-103 (IV-4)	<i>Receivers, TR Boxes, Measurements</i> , Feb. 4 to Mar. 28, 1941. Div. 14-241-M6
RL-83 (II-5)	<i>Transmitter Tube Section</i> , Mar. 18, 1941. Div. 14-232.19-M1	RL-104 (IV-5)	<i>Receivers</i> , Aug. 1, 1941. Div. 14-241-M7
RL-84 (II-6)	<i>Transmitter Tube Section</i> , May 19, 1941. Div. 14-232.19-M1	RL-105 (IV-1S)	<i>Visit of Receiver Section to the Bell Telephone Laboratories</i> , Mar. 7, 1941. Div. 14-241-M4
RL-85 (II-7)	<i>Transmitter Tube Section</i> , July 1, 1941. Div. 14-232.113-M1	RL-106 (IV-2S)	<i>Special Report on Receivers</i> , June 24, 1941. Div. 14-241-M6
RL-86 (II-1S)	<i>Guide to the Operation of 10-Cm Standard Magnetrons</i> , G. B. Collins, H. L. Stout, Oct. 20, 1941. Div. 14-232.113-M2	RL-107 (IV-4S)	<i>Special Report on Tuning Indicators and Automatic-Tuning Systems</i> , H. G. Weiss, Sept. 15, 1941. Div. 14-242.12-M1
RL-87 (II-2S)	<i>Special Report on Characteristics of 3-Cm Magnetrons and Instructions for Their Operation</i> , G. B. Collins, L. F. Moose, Dec. 10, 1941. Div. 14-232.112-M1	RL-108 (IV-5S)	<i>Special Report on Signal-to-Noise Measurements on Receivers</i> , R. F. Bachar, Sept. 29, 1941. Div. 14-241.1-M1
RL-88 (II-3S)	<i>Note on Design of Magnetrons</i> , G. B. Collins, Feb. 9, 1942. Div. 14-232.1-M1	RL-109 (IV-6S)	<i>Special Report on 30-Mc Pulsed Signal Generator</i> , P. C. Mielod, Oct. 16, 1941. Div. 14-251.6-M1
RL-89 (II-4S)	<i>Waveguide Termination for Measuring Power at 3.2 Cm</i> , R. T. Young, Jr., Feb. 24, 1942. Div. 14-233.412-M1	RL-110 (IV-7S)	<i>Special Report on Comparative Signal Noise Measurements on Crystal Mixers and Grounded Grid-Tube Mixers</i> , Dec. 17, 1941. Div. 14-233.12-M1
RL-90 (II-5S)	<i>Cathode Temperatures in Magnetrons</i> , C. S. Robinson, Jr., Mar. 31, 1942. Div. 14-232.143-M1	RL-111 (IV-6S)	<i>A 1-Cm Oscillator</i> , Mar. 11, 1942. Div. 14-241.41-M1
		RL-112 (IV-9S)	<i>I-F Amplifier Design</i> , Apr. 3, 1942. Div. 14-241.32-M1
		RL-113 (V-0S)	<i>Transmission through Dielectric</i> , L. J. Chu, Dec. 11, 1940. Div. 14-131.3-M1
		RL-114 (V-1S)	<i>Theory of Radiation from Paraboloidal Reflectors</i> , L. J. Chu, Feb. 12, 1941. Div. 14-111-M1

CONFIDENTIAL

- RL-115 (V-2S) *Noise and the Reception of Pulses*, J. C. Slater, February 13, 1941.
Div. 14-125-M1
- RL-116 (V-3S) *Impedance in Transmission Lines and Waveguides*, P. M. Morse, Apr. 15, 1941.
Div. 14-233.41-M1
- RL-117 (V-4S) *Report on Night Fighter Pursuits*, H. M. James, June 13, 1941.
Div. 14-326.1-M1
- RL-118 (V-5S) *Theory of the Magnetron Oscillator*, J. C. Slater, Aug. 1941.
Div. 14-232.19-M2
- RL-119 (V-6S) *Coincidence Method of Noise Reduction*, W. W. Hansen, Aug. 25, 1941.
Div. 14-125.2-M1
- RL-120 (V-7S) *Considerations Affecting Choice of Wavelength*, K. T. Bainbridge, Sept. 24, 1941.
Div. 14-121.1-M1
- RL-121 (V-8S) *Microwave Transmission*, J. C. Slater, Oct. 16, 1941.
Div. 14-122.1-M1
- RL-122 (V-9S) *Theory of the Magnetron Oscillator, Electronic Orbits in the Cylindrical Magnetron with Static Fields*, W. P. Allis, Oct. 1, 1941.
Div. 14-232.19-M3
- RL-123 (V-10S) *Notes on Antenna Design*, J. A. Stratton, L. J. Chu, Oct. 21, 1941.
Div. 14-234.22-M1
- RL-124 (V-11S) *Report on Junction Effects in Waveguides*, N. H. Frank, Nov. 1, 1941.
Div. 14-233.422-M1
- RL-125 (V-12S) *Ideal Frequency Response of a Receiver for Square Pulses*, H. M. James, Nov. 1, 1941.
Div. 14-241.1-M2
- RL-126 (V-13S) *Correction of the Scanning of Shipborne Radar Systems for Roll and Pitch of the Ship*, H. M. James, Dec. 22, 1941.
Div. 14-234.33-M1
- RL-127 (V-14S) *Theory of the Split Anne Magnetron*, L. Brillouin, Jan. 7, 1942.
Div. 14-232.19-M5
- RL-128 (V-15S) *Theory of Diffraction by Small Holes*, H. A. Bethe, Jan. 23, 1942.
Div. 14-111-M4
- RL-129 (V-16S) *Response of a Nonlinear Device to Noise*, N. Wiener, Apr. 6, 1942.
Div. 14-125-M2
- RL-130 (VI-1) *Cathode-Ray Indicator*, Dec. 29, 1940.
Div. 14-242.2-M1
- RL-131 (VI-2) *Report of the Indicator Section*, Feb. 13, 1941.
Div. 14-242-M1
- RL-132 (VI-3) *Brief Report of Activities from Feb. 12 to March 4, 1941*, W. M. Hall, Mar. 4, 1941.
Div. 14-242-M2
- RL-133 (VI-4) *Report of Section VI, March 4 to March 22, 1941*, Mar. 25, 1941.
Div. 14-503-M1
- RL-134 (VI-5) *Report by Indicator Group*, May 14, 1941.
Div. 14-242-M3
- RL-135 (VI-1S) *Special Report for the Cathode-Ray Tube Section (Brief Summary of Results of Persistence Calculations)* Feb. 28, 1941.
Div. 14-242.2-M2
- RL-136 (VI-2S) *Persistence Measurements*, July 7, 1941.
Div. 14-242.233-M1
- RL-137 (VI-4S) *Luminescence of RCA Cathode-Ray Tube with Cascade Screen*, W. B. Nottingham, Feb. 2, 1942.
Div. 14-242.231-M1
- RL-138 (VI-5S) *Indicator Components as Used in a Complete Aircraft-Interception Installation*, W. A. Higenbotham, Apr. 20, 1942.
Div. 14-326-M3
- RL-139 (VII-1,2) *Klystron and C-IF Test Sets*, Dec. 19, 1940.
Div. 14-241.411-M1
- RL-140 (VII-3) *Report of the Radio-Frequency Section*, July 7, 1941.
Div. 14-232-M1
- RL-141 (VII-OS) *Design and Test of Concentric Transmission Lines*, J. L. Lawson, July 15, 1941.
Div. 14-233.413-M11
- RL-142 (VII-1S) *Tentative Simplified Explanation of the Lawson Line*, July 25, 1941.
Div. 14-111-M2
- RL-143 (VII-2S) *Special Report on Tunable Cavities*, Oct. 18, 1941.
Div. 14-211.5-M1
- RL-144 (VII-3S) *Special Report on Transmission Characteristics of Suggested Airplane Nose Materials*, Oct. 21, 1941.
Div. 14-234.52-M1
- RL-145 (VII-4S) *Special Report on the Littlefuse Bolometer*, Oct. 28, 1941.
Div. 14-252.41-M1
- (VII-4Sa) *Special Report on the Littlefuse Bolometer*, Oct. 28, 1941.
Div. 14-252.41-M1
- RL-146 (VII-5S) *Special Report on the Reflection of Plane Waves by Magnetic Substances*, O. Halpern, Dec. 3, 1941.
Div. 14-111-M3
- RL-147 (VII-6S) *Special Report on Design Data for 50-Ohm Rigid Coaxial Line*, Dec. 5, 1941.
Div. 14-233.413-M1
- RL-148 (VII-7S) *Theory of a "Black Body" Produced by a Combination of a Thin Screen and a Perfect Mirror*, O. Halpern, Dec. 12, 1941.
Div. 14-113-M1
- RL-149 (VII-8S) *A Wide-Range High-Voltage Regulator*, Dec. 20, 1941.
Div. 14-235.2-M1
- RL-150 (VII-9S) *Transmit-Receive Switch*, Jan. 20, 1942.
Div. 14-233.311-M1
- RL-151 (VII-10S) *RF Components List No. 1*, Jan. 20, 1942.
Div. 14-233-M1
- RL-152 (VII-11S) *Tests on Undercut Beads in a Concentric Line*, W. H. Fean, Jan. 30, 1942.
Div. 14-233.413-M2
- RL-153 (VII-12S) *Crystals*, N. Rochester, Feb. 17, 1942.
Div. 14-233.1-M1
- RL-154 (VII-13S) *Theory of a "Black Body," Supplement to Report RL-148 (VII-7S)*, O.

CONFIDENTIAL

- Halpern, Feb. 6, 1942.
Div. 14-113-M2
- RL-155 (VII-148) *A Method to Measure High-Frequency Permeability of a Ferromagnetic Body*, O. Halpern, Feb. 21, 1942.
Div. 14-111-M5
- RL-156 (VII-158) *Scattering of 10-Cm Radiation by a Model Airplane*, R. C. Raymond, May 21, 1942. Div. 14-122.113-M1
- RL-157 (VIII-1,2) *Coordination*, F. D. Lewis, Dec. 19, 1940. Div. 14-501-M2
- RL-158 (VIII-3) *Coordination*, Jan. 2, 1941.
Div. 14-501-M2
- RL-159 (VIII-18) *Recommended Designations of Radar Indicator Types*, Feb. 3, 1942.
Div. 14-242-M7
- RL-160 (41-1) *Tune-up Procedure for 3-Cm R-F System*, W. M. Preston, May 25, 1942.
Div. 14-233.5-M1
- RL-161 (41-2) *Matching, Losses, and Frequency Sensitivity of a 3-Cm R-F System*, W. M. Preston, May 25, 1942.
Div. 14-231.5-M2
- RL-162 (41-3) *Polarization Effects in a Circular Waveguide at 3 Cm*, D. D. Montgomery, C. G. Montgomery, Sept. 12, 1942. Div. 14-233.412-M4
- RL-163 (41-4) *3-Cm Magnetron Cold Impedance*, D. D. Montgomery, C. G. Montgomery, Sept. 16, 1942. Div. 14-232.112-M4
- RL-164 (41-5) *Losses and Reflections Introduced by Joints and Plungers in 3-Cm Waveguides*, C. G. Montgomery, D. D. Montgomery, Oct. 15, 1942.
Div. 14-233.422-M4
- RL-165 (41-6) *Waveguide Components and Instruments for the 1.25-Cm Region*, E. M. Purcell, Dec. 3, 1942.
Div. 14-233.412-M8
- RL-166 (41-7) *Various 3-Cm TR Box Characteristics*, N. C. Colby, C. W. Zabel, Jan. 6, 1943. Div. 14-233.312-M4
- RL-167 (41-8) *Measurements with a Frequency-Modulated Oscillator at 3 Cm*, C. G. Montgomery, D. D. Montgomery, Jan. 18, 1943. Div. 14-251.9-M4
- RL-168 (41-9) *A Method for Measuring the Absolute Gain of Microwave Antennas*, E. M. Purcell, Jan. 3, 1943.
Div. 14-234.4-M2
- RL-169 (41-10) *Rear Rectangular-Guide Antenna Feed*, J. S. Foster, Mar. 24, 1943.
Div. 14-234.21-M2
- RL-170 (41-11) *Illumination and Phases of Antenna Feeds*, J. S. Foster, Mar. 29, 1943.
Div. 14-234.21-M3
- RL-171 (41-12) *Round Guide Rear Antenna Feeds*, J. S. Foster, Apr. 28, 1943.
Div. 14-234.21-M4
- RL-172 (42-1) *Radar Echoes from Periscopes*, J. E. Freehafer, Mar. 1, 1943.
Div. 14-321.12-M2
- RL-173 (42-2) *Radar Echoes from Atmospheric Phenomena*, A. E. Bent, Mar. 13, 1943. Div. 14-122.23-M1
- RL-174 (43-1) *Propagation in Waveguides Partially Filled with a Dielectric*, N. H. Frank, Apr. 27, 1942. Div. 14-233.412-M2
- RL-175 (43-2) *Atmospheric Absorption of Microwaves*, J. H. Van Vleck, Apr. 27, 1942.
Div. 14-121.1-M4
- RL-176 (43-3) *Theory of Space-Charge in an Oscillating Magnetron*, W. P. Allis, July 1, 1942. Div. 14-232.19-M6
- RL-177 (43-4) *Radiation Resistance of Antennas Inside Waveguides of Arbitrary Cross Sections*, L. J. Chu, July 3, 1942. Div. 14-233.412-M3
- RL-178 (43-5) *New Approach Procedure for Night Fighting*, H. M. James, June 26, 1942.
Div. 14-326.1-M3
- RL-178a (43-5a) *New Method of Night Fighting*, Abridged Edition of RL-178 (43-5) H. M. James, June 30, 1942.
Div. 14-326.1-M4
- RL-179 (43-6) *T Junctions in Rectangular Waveguides, Part I, Theory*, N. H. Frank, L. J. Chu, July 27, 1942.
Div. 14-233.422-M3
- RL-180 (43-7) *T Junctions in Rectangular Waveguides, Part II, Final Formulas and Curves*, L. J. Chu, N. H. Frank, July 19, 1942. Div. 14-233.422-M2
- RL-181 (43-8) *Statistical Treatment of Certain Phases of Aerial Combat*, H. M. James, July 30, 1942. Div. 14-600-M1
- RL-182 (43-9) *Resonant Modes of the Magnetron*, J. C. Slater, Aug. 31, 1942.
Div. 14-232.12-M1
- RL-183 (43-10) *Susceptance of Asymmetrically Located Windows in Rectangular Waveguides*, A. E. Heins, Oct. 16, 1942.
Div. 14-233.423-M1
- RL-184 (43-11) *Theory of High-Frequency Rectification by Silicon Crystals*, H. A. Bethe, Oct. 29, 1942. Div. 14-233.1-M2
- RL-185 (43-12) *Theory of the Boundary Layer of Crystal Rectifiers*, H. A. Bethe, Nov. 23, 1942. Div. 14-233.112-M1
- (43-13) No report.
- RL-186 (43-14) *General Relations Determining the Range of a Radar System*, D. H. Ewing, Nov. 12, 1942. Div. 14-234-M2
- RL-187 (43-15) *Effect of Routine Evasive Action on the Calculated Approach Procedure*, H. M. James, Dec. 16, 1942.
Div. 14-326.1-M5
- RL-188 (43-16) *Forced Oscillations in Cavity Resonators*, J. C. Slater, Dec. 31, 1942.
Div. 14-111-M6

CONFIDENTIAL

- RL-189 (43-17) *Reflections from Sections of Tapered Transmission Lines and Waveguides*, N. H. Frank, Jan. 6, 1943.
Div. 14-233.41-M4
- RL-190 (43-18) *Input Impedance and Tuning of Magnetron Cavities*, J. C. Slater, Feb. 3, 1943.
Div. 14-232.17-M1
- RL-191 (43-19) *Kinetic Derivation of the Thermal Noise Formula*, P. R. Weiss, S. A. Goudsmit, Jan. 18, 1943.
Div. 14-125-M3
- RL-192 (43-20) *Statistics of Circuit Noise*, S. A. Goudsmit, P. R. Weiss, Jan. 29, 1943.
Div. 14-125-M4
- RL-193 (43-21) *Comparison Between Signal and Noise*, S. A. Goudsmit, Jan. 29, 1943.
Div. 14-125-M5
- RL-194 (43-22) *Lumped Constants for Small Irises*, H. A. Bethe, Mar. 24, 1943.
Div. 14-233.423-M3
- RL-195 (43-23) *Microwave Radar Reflections*, J. F. Carlson, S. A. Goudsmit, Feb. 20, 1943.
Div. 14-122.11-M1
- RL-196 (43-24) *Possible Measurement of Radar Echoes by Use of Model Targets*, S. A. Goudsmit, P. R. Weiss, Mar. 4, 1943.
Div. 14-122.113-M5
- RL-197 (43-25) *Coupling between Inductive Windows in Waveguides*, N. H. Frank, Feb. 27, 1943.
Div. 14-233.422-M6
- RL-198 (43-26) *Formal Theory of Waveguides of Arbitrary Cross Section*, H. A. Bethe, Mar. 16, 1943. Div. 14-233.412-M10
- RL-199 (43-27) *Theory of Side Windows in Waveguides*, H. A. Bethe, Apr. 4, 1943.
Div. 14-233.423-M4
- RL-200 (43-28) *Theory of Magnetron Operation*, J. C. Slater, Mar. 8, 1943.
Div. 14-232.1-M2
- RL-201 (43-29) *Numerical Calculation of Space-Charge Behavior and Power in the Magnetron*, G. Vineyard, Mar. 29, 1943.
Div. 14-232.19-M7
- RL-202 (43-30) *Excitation of Cavities through Window*, H. A. Bethe, Apr. 9, 1943.
Div. 14-211.5-M4
- RL-203 (43-31) *Application of Corner Reflectors to Radar (Theoretical)*, R. D. O'Neal, F. S. Holt, P. D. Crout, May 14, 1943.
Div. 14-267-M1
- RL-204 (43-32) *Use of the Rangr Clock in Night Fighting with AI Equipment*, H. M. James, Apr. 28, 1943.
Div. 14-326.1-M6
- (43-33) No report.
- RL-205 (43-34) *Theory of Obstacles in Resonant Cavities and Waveguides*, J. S. Schwinger, May 21, 1943. Div. 14-233.412-M11
- RL-206 (43-35) *Theory of Circular Beams in Rectangular Waveguides*, R. E. Marshak, June 24, 1943. Div. 14-233.412-M12
- RL-207 (50-1) *Spark-Gap Colloquium at Radiation Laboratory, MIT, July, 1942*, M. G. White, editor, Sept. 28, 1942.
Div. 14-231.2-M2
- RL-208 (50-2) *Modulator Colloquium, April 16-17, 1943*, A. S. Jerrems, editor, June 9, 1943.
Div. 14-231-M5
- RL-209 (51-8) *Rotary Spark-Gap Modulators*, H. J. White, J. R. Dillinger, May 19, 1942.
Div. 14-231.23-M1
- RL-210 (51-9) *Tests on Five Types of Triggered Switch Modulators*, J. M. LaRue, J. R. Perkins, K. J. Germeshausen, June 1, 1942.
Div. 14-231.21-M2
- RL-211 (51-10) *Report on Some Tubes Used in Hard-Tube Modulators*, W. H. Bostick, H. D. Doolittle, W. D. Reed, May 19, 1942.
Div. 14-231.1-M1
- RL-212 (51-11) *Report on Hard-Tube Modulators and Drivers*, A. E. Whitford, May 26, 1942.
Div. 14-231.1-M2
- RL-213 (51-12) *Pulse Transformern*, S. Sonkin, July 23, 1942.
Div. 14-211.41-M1
- RL-214 (51-13) *Line-Controlled Blocking Oscillator*, W. O. Reed, Oct. 29, 1942.
Div. 14-212.5-M1
- RL-215 (51-14) *Measurement and Design of D-C Resonant Charging Chokes*, A. C. Donovan, Nov. 23, 1942. Div. 14-211.42-M1
- RL-216 (51-15) *Modulated Pulse Communication*, A. S. Jerrems, A. E. Whitford, Apr. 13, 1943.
Div. 14-261-M1
- RL-217 (51-16) *Pulse Transformers*, W. H. Bostick, P. R. Gillette, H. L. Rehkopf, June 1, 1943.
Div. 14-211.41-M3
- RL-218 (51-17) *Oscilloscope Presentation of Hysteresis Loops at 60 Cycles and under Pulse Conditions*, W. H. Bostick, P. R. Gillette, H. L. Rehkopf, June 1, 1943.
Div. 14-251.71-M3
- RL-219 (51-18) *Test Equipment for Pulse Transformers*, W. H. Bostick, P. R. Gillette, H. L. Rehkopf, June 1, 1943.
Div. 14-211.41-M2
- RL-220 (52-1) *Preliminary Report on Frequency Shift vs. Magnetron Box Temperature*, H. L. Stout, July 3, 1942.
Div. 14-232.16-M1
- RL-221 (52-2) *RF Loading of 10-cm Magnetrons*, F. F. Rieke, J. E. Evans, Aug. 24, 1942.
Div. 14-232.113-M4
- RL-222 (52-3) *Strapping Tolerances for Magnetrons*, E. Everhart, Dec. 31, 1942.
Div. 14-232.13-M1
- RL-223 (52-4) *Magnetron Strapping Wavelength Calculations for Strapped Magnetrons*, E. Everhart, Jan. 27, 1943.
Div. 14-232.13-M2
- RL-224 (52-5) *Fourier Analysis of Pulses with Frequency Shifts During the Pulse*, R. T.

CONFIDENTIAL

- Young, Jr., Jan. 30, 1943.
Div. 14-124-M1
- RL-225 (52-6) *Frequency and Spectrum Characteristics of Standard Magnetrons and the Effect of Change of Shape of Current Poles*, R. T. Young, Jr., Mar. 12, 1943. Div. 14-232.18-M1
- RL-226 (52-7) *Practical Considerations of Magnetron Design*, W. V. Smith, Aug. 22, 1943. Div. 14-232.1-M3
- RL-227 (52-8) *Performance Characteristics of the Magnetron under Conditions Simulating Beacon Operation, Tube Types 2J38 and 2J22*, K. R. More, June 30, 1943. Div. 14-232.113-M5
- RL-228 (52-9) *Spectra of Magnetrons for Long Pulses*, R. T. Young, Jr., July 5, 1943. Div. 14-232.18-M2
- RL-229 (52-10) *Analysis of Magnetron Performance, Part I, Equivalent Circuit, Method, Applications*, F. F. Rieke, Sept. 16, 1943. Div. 14-232.1-M5
- RL-230 (52-11) *Field Patterns in Cold Magnetrons, including Correlation with Tube Performance and Tunable Design*, W. V. Smith, A. G. Smith, Aug. 10, 1943. Div. 14-232.19-M10
- RL-231 (53-1) *Transmission Line Construction Details*, A. E. Hayes, Jr., May 14, 1942. Div. 14-233.43-M2
- RL-232 (53-2) *Stub Supports in $\frac{1}{2}$ -inch Coaxial Lines*, R. V. Pound, May 10, 1942. Div. 14-233.421-M1
- RL-233 (53-3) *Operating Characteristics of the 707A Reflex Oscillator (McNally Tube)*, C. S. Robinson, Jr., June 9, 1942. Div. 14-241.413-M1
- RL-234 (53-3a) *Operating Characteristics of the 707A Reflex Oscillator, McNally Tube, Supplement to Report 53-3*, C. S. Robinson, Jr., July 8, 1942. Div. 14-241.413-M1
- RL-235 (53-4) *Operating Characteristics of the 417 Reflex Klystron*, C. S. Robinson, Jr., July 1, 1942. Div. 14-241.411-M3
- RL-236 (53-5) *Temperature-Compensated 707A (McNally Tube)*, C. S. Robinson, Jr., Aug. 25, 1942. Div. 14-241.413-M2
- RL-237 (53-6) *Phase Distortion in Broad-Band Stub Supports*, R. V. Pound, Aug. 17, 1942. Div. 14-233.421-M2
- RL-238 (53-7) *Preplumbing of Tees for G-Band*, R. V. Pound and R. Berger, Nov. 3, 1942. Div. 14-233.31-M1
- RL-239 (53-8) *Microwave Wattmeter, Part I*, M. H. Johnson, Nov. 18, 1942. Div. 14-252.4-M1
- RL-240 (53-9) *Loss Measurement by Two-Prong Power Reversal Method*, G. L. Ragan, Dec. 7, 1942. Div. 14-252.4-M2
- RL-241 (53-10) *X-Band Low-Pressure Tests*, T. S. Saad, Dec. 10, 1942. Div. 14-252-M1
- RL-242 (53-11) *An S-Band Crystal Mixer*, R. V. Pound, Dec. 14, 1942. Div. 14-233.12-M8
- RL-243 (53-12) *Rotary Joints with E-Stub Transformers*, W. M. Preston, Dec. 18, 1942. Div. 14-233.421-M3
- RL-244 (53-13) *Dielectric Transmission Measurements*, H. A. Leiter, Jan. 15, 1943. Div. 14-131.3-M2
- RL-245 (53-14) *Design Characteristics of Spinner Housing Materials*, E. B. McMillan, Jan. 12, 1943. Div. 14-234.52-M2
- RL-246 (53-15) *Microwave Wattmeter, Part II, 3-cm and 1-cm*, M. H. Johnson, J. B. Wiesner, Jan. 21, 1943. Div. 14-252.4-M3
- RL-247 (53-16) *Comparison of the Frequency Sensitivities of Series and Shunt TR Junctions*, R. V. Pound, Jan. 20, 1943. Div. 14-233.31-M3
- RL-248 (53-17) *Corrosion of Copper, Brass, and Aluminum by Gaseous Dielectrics*, C. S. Pearsall, Jan. 13, 1943. Div. 14-223-M1
- RL-249 (53-18) *Measurements of 721A TR Tube Leakage Power*, L. D. Smullin, Mar. 9, 1943. Div. 14-233.31-M4
- (53-19) Published and then recalled.
- RL-250 (53-20) *X-Band Measurements at Low Pressure*, T. S. Saad, May 18, 1943. Div. 14-233.5-M8
- RL-251 (53-21) *Operating Characteristics of the 419 Klystron*, C. M. Hepperle, Apr. 23, 1943. Div. 14-241.411-M4
- RL-252 (53-22) *A Method of Measuring the S-Band Characteristic Impedance of Coaxial Cable*, F. E. Ehlers, Apr. 28, 1943. Div. 14-233.413-M5
- RL-253 (53-23) *A Simplified Analysis of Conversion Loss of Crystal Converters*, S. Roberts, July 3, 1943. Div. 14-233.14-M2
- RL-254 (53-24) *Preignition Transmission through Gas-switching Tubes and Its Contribution to Crystal Failures*, F. L. McMillan, Jr., J. B. Wiesner, July 3, 1943. Div. 14-233.311-M2
- RL-255 (53-25) *Capacity (Choke) Couplings as Rigid and Nonrigid Waveguide Connectors*, J. Reed, G. L. Ragan, H. K. Farr, M. Clark, Aug. 27, 1943. Div. 14-233.422-M7
- RL-256 (53-26) *Testing of IN21 Navy Crystal Rectifiers*, H. B. Huntington, S. Roberts, H. C. Torrey, C. A. Whitmer, July 12, 1943. Div. 14-233.152-M1
- (53-27) No report.
- RL-257 (53-28) *Conversion Loss Measuring Apparatus for Crystals in the S-Cm Band*, S.

CONFIDENTIAL

- Roberts, Aug. 3, 1943.
Div. 14-233.15-M3
(5-I-I-8) See RL-91 (III-1) to RL-98 (III-8).
RL-258 (54-9) *Effect of Paraboloid Size and Shape on Beam Patterns*, L. C. Van Atta, Aug. 5, 1942. Div. 14-231.231-M1
(54-10) See RL-99 (III-10).
RL-259 (54-11) *Graphical Analysis of Beam Patterns from Paraboloid Reflectors*, S. G. Sydorak, L. C. Van Atta, June 11, 1942. Div. 14-234.4-M1
RL-260 (54-12) *Pillbox Antenna for Glide Path*, C. V. Robinson, Nov. 9, 1942. Div. 14-231.6-M4
RL-261 (54-13) *Some Matching Properties of Antenna Feeds*, H. Krutter, R. Hiatt, J. Bohnert, Nov. 17, 1942. Div. 14-234.21-M1
RL-262 (54-14) *3-Cm Bolometer Detector Suitable for Field Measurements (Type Y)*, S. Breen, Dec. 11, 1942. Div. 14-252.41-M3
RL-263 (54-15) *Horizontally Polarized 9.1-Cm Biconical-Horn Beacon Antenna*, C. V. Robinson, Nov. 10, 1942. Div. 14-328.21-M1
RL-264 (54-16) *Information on Corrugated Coaxial Lines and Wave Guides*, G. G. Harvey, Dec. 11, 1942. Div. 14-233.41-M3
RL-265 (54-17) *Rapid-Scanning, High-Resolution Antennas, Preliminary Report*, C. V. Robinson, Feb. 15, 1943. Div. 14-234.322-M1
RL-266 (54-18) *An Automatic Recorder for Microwave Antenna Pattern Measurements*, T. J. Keary, R. E. Alley, Jr., Mar. 1, 1943. Div. 14-234.4-M3
RL-267 (54-19) *45° Microwave Reflector*, S. J. Mason, Nov. 19, 1943. Div. 14-234.22-M6
RL-268 (54-20) *Gratings and Screens on Microwave Reflectors*, W. D. Hayes, Apr. 1, 1943. Div. 14-234.22-M4
RL-269 (54-21) *Information on Standard Radiation Laboratory Paraboloid Reflectors*, L. C. Van Atta, C. V. Robinson, Mar. 3, 1943. Div. 14-231.231-M2
RL-270 (54-22) *A Simple Method for Determination of the Law of a Crystal*, H. Krutter, Apr. 29, 1943. Div. 14-233.1-M3
RL-271 (54-23) *Antenna Feeds for $\frac{1}{2}$ -In. Stub-Supported Coaxial Line*, S. Breen, R. Hiatt, June 21, 1943. Div. 14-234.21-M5
RL-272 (54-24) *Synthesis of Microwave Diffraction Patterns with Application to Cas Patterns*, R. C. Spencer, June 23, 1943. Div. 14-234.22-M5
RL-273 (54-25) *Double Dipole Rectangular Wave Guide Antennas*, W. Siehak, June 26, 1943. Div. 14-233.412-M13
RL-274 (54-26) *Antenna Feeds from $\frac{1}{2}$ -In. Coaxial Line*, W. B. Nowak, July 5, 1943. Div. 14-234.21-M6
RL-275 (54-27) *Report of Conference on Rapid Scanning*, G. C. Harvey, June 15, 1943. Div. 14-234.322-M2
RL-276 (54-28) *The Antenna Slide Rule, Series L*, R. C. Spencer, June 3, 1943. Div. 14-234.6-M5
RL-277 (55-1) *The Resonant Echo Box*, W. H. Fenn, Sept. 4, 1942. Div. 14-251.3-M1
RL-278 (55-2) *Multiple Pulse Generators*, W. O. Reed, Oct. 15, 1942. Div. 14-251.6-M2
RL-279 (55-3) *General Report on Low-Level Power Measurement at 10 Cms in Coax*, R. N. Griesheimer, Mar. 16, 1943. Div. 14-252.4-M4
RL-280 (55-4) *Application of Corner Reflectors to Radar (Experimental)*, R. D. O'Neal, July 1, 1943. Div. 14-267-M2
RL-281 (56-1) *Temperature-Rise in ATR Racks*, S. P. Hunt, Oct. 16, 1942. Div. 14-224-M1
RL-282 (56-2) *Production Sources of Selfsynchronizing Units*, S. Noodelman, Dec. 1, 1942. Div. 14-214.2-M5
RL-283 (61-1) *Conference on Standardization of Intermediate Frequency*, C. E. Ingalls, Apr. 18, 1942. Div. 14-241.1-M3
RL-284 (61-2) *Preliminary Report on a 10-Cm Super-Regenerative Receiver*, J. B. H. Kuper, May 1, 1942. Div. 14-241.2-M1
RL-285 (61-3) *Impulse and Square-Pulse Response of Various Filters*, H. Wallman, June 10, 1942. Div. 14-211.7-M1
RL-286 (61-4) *Committee on Centimeter Receiving Tubes and Resonators*, May 18, 1942. Div. 14-241.4-M1
RL-287 (61-5) *Theory of Radar Mixers*, R. H. Dicke, S. Roberts, July 15, 1942. Div. 14-233.12-M2
RL-288 (61-6) *A 10-20-Cm Bolometer*, W. M. Breazeale, Aug. 26, 1942. Div. 14-252.41-M2
RL-289 (61-7) *Noise Measurements on Microwave Converters*, W. H. Breazeale, Sept. 15, 1942. Div. 14-233.151-M1
RL-290 (61-8) *Report on Tests of RCA and GE Lighthouse Tubes*, J. B. H. Kuper, P. A. Cole, F. Bailey, Jan. 11, 1943. Div. 14-232.2-M1
RL-291 (61-9) *Performance of the GL446 Lighthouse Tube as an RF Amplifier in the 10-20-Cm Region*, W. M. Breazeale, M. Waltz, Oct. 5, 1942. Div. 14-241.42-M1
RL-292 (61-10) *Lighthouse Tube Anode Contacts*, P. A. Cole, Jan. 19, 1943. Div. 14-232.2-M2
RL-293 (61-11) *Theory of Noise Measurements on Crystals as Frequency Converters*, S. Roberts, Jan. 30, 1943. Div. 14-233.15-M1

CONFIDENTIAL

- RL-294 (61-12) *Use of the Temperature-Limited Diode in Measurements of Noise Figures of Crystals*, W. M. Breazeale, Y. Beers, Feb. 27, 1943.
Div. 14-211.61-M1
- RL-295 (61-13) *Notes on Measurement of Noise, Gain and Noise Figure of Converters*, William M. Breazeale, Jan. 30, 1943.
Div. 14-125.1-M1
- RL-296 (61-14) *Noise-Temperature Measuring Apparatus for Crystals as 10,000 to 30-Megacycle Converters*, S. Roberts, Feb. 11, 1943.
Div. 14-233.151-M2
- RL-297 (61-15) *Low-Level Crystal Detectors*, R. Barlinger, Mar. 16, 1943.
Div. 14-233.12-M4
- RL-298 (61-16) *S-Band ASV Marker*, J. S. Kirby-Smith, Mar. 27, 1943.
Div. 14-325-M2
- RL-299 (61-17) *Fine Grid Technique*, C. Nawrocki, Apr. 3, 1943.
Div. 14-241.43-M1
- RL-300 (61-18) *A Reciprocity Theorem and Its Application to Measurement of Gain of Microwave Crystal Mixers*, R. H. Dicke, Apr. 13, 1943.
Div. 14-233.12-M5
- RL-301 (61-19) *A 30-Mc Schering Bridge*, Y. Beers, May 12, 1943.
Div. 14-261.1-M1
- RL-302 (61-20) *A Video Delay Line*, D. F. Weekes, Apr. 24, 1943.
Div. 14-211.2-M1
- RL-303 (61-21) *Characteristics of the Present Production of McNally Tubes*, F. S. Bailey, June 3, 1943.
Div. 14-241.41-M3
- RL-304 (61-22) *Noise from Local Oscillators*, Y. Beers, June 8, 1943.
Div. 14-241.41-M4
- RL-305 (61-23) *Action of Linear Detector on Signals in the Presence of Noise*, W. H. Jordan, July 6, 1943.
Div. 14-241.6-M1
- RL-306 (61-24) *The Radiation Laboratory S-Band Amplifier (Preliminary Report)*, H. V. Neher, July 10, 1943.
Div. 14-241.3-M3
- RL-307 (61-25) *A 70-Mc Wide IF Amplifier*, H. Wallman, June 26, 1943.
Div. 14-241.32-M3
- RL-308 (62-1) *Plan Position Indicators*, Aug. 4, 1942.
Div. 14-242.3-M4
- RL-309 (62-2) *Proposed Performance Specifications for the P7 Long-Persistence Cascade Screen*, W. B. Nottingham, T. Soller, R. F. Bacher, Aug. 12, 1942.
Div. 14-242.231-M4
- RL-310 (62-3) *Report on Measurements of British CR Tubes with Long-Persistence Screens*, W. B. Nottingham, Oct. 7, 1942.
Div. 14-242.231-M5
- RL-311 (62-4) *AIA Indicators*, L. J. Haworth, Nov. 16, 1942.
Div. 14-242.12-M3
- RL-312 (62-5) *Plan Position Indicator Using a Sinusoidal Potentiometer*, C. W. Sherwin, Dec. 30, 1942.
Div. 14-211.3-M1
- RL-313 (62-6) *Linearity of Standard Wire-Wound Volume-Control Type Potentiometers*, P. Rosenberg, Feb. 3, 1943.
Div. 14-211.3-M2
- RL-314 (62-7) *Conference on P7 Cathode-Ray Tubes Held April 5 and 6, 1943*, W. B. Nottingham, May 14, 1943.
Div. 14-242.21-M2
- RL-315 (62-8) *A Shipborne Mechanical Rotation Plan Position Indicator*, L. Mautner, June 3, 1943.
Div. 14-242.3-M7
- RL-316 (62-9) *Specification of Performance Tests for PPI Sinusoidal Potentiometer Types RL10K and RL14*, P. Rosenberg, May 25, 1943.
Div. 14-211.3-M3
- RL-317 (62-10) *Indicators for a Ground-Controlled Approach System*, C. W. Sherwin, July 1, 1943.
Div. 14-242.12-M4
- RL-318 (62-11) *Present Status of Potentiometer Projects in the Radiation Laboratory*, P. Rosenberg, June 15, 1943.
Div. 14-211.3-M4
- RL-319 (63-1) *Precision-Tuning Calibrator and Range Measuring System*, B. Chance, May 12, 1942.
Div. 14-251.2-M1
- RL-320 (63-2) *Precision-Delay Multivibrator for Range Measurement*, B. Chance, M. H. Johnson, R. S. Phillips, June 1, 1942.
Div. 14-212.7-M1
- (63-3) No report.
- RL-321 (63-4) *Medium Precision Self-Synchronous Range Circuit Model 4*, B. Chance, May 28, 1942.
Div. 14-243.2-M1
- RL-322 (63-5) *Circular-Sweep Precision Range System Model 4*, B. Chance, July 6, 1942.
Div. 14-243.1-M1
- RL-323 (63-6) *Medium Precision, Selfsynchronous Automatic Range-Tracking Circuit Model 4*, E. F. MacNickol, Jr., B. Chance, June 18, 1942.
Div. 14-244.5-M1
- RL-324 (63-7) *Photoelectric Automatic Range-Tracking Unit*, A. M. Grass, A. C. Hughes, Jr., B. Chance, Jan. 25, 1943.
Div. 14-241.2-M1
- RL-325 (63-8) *Simplified Circular-Sweep Range System*, B. Chance, Sept. 10, 1942.
Div. 14-243.1-M2
- RL-326 (63-9) *Anti-aircraft Artillery Board Test on the Simplified Circular-Sweep Range*, Supplement to 63-8, B. Chance, Dec. 1, 1942.
Div. 14-323.4-M1
- RL-327 (63-10) *Hand-Radar Ranging Circuit*, B. Chance, Jan. 8, 1943.
Div. 14-212.5-M2
- RL-328 (63-11) *Errors in Circular Sweeps Due to De-centering and Ellipticity of the Circle*,

CONFIDENTIAL

- E. B. Hales, Feb. 13, 1943.
Div. 14-242.5-M1
- RL-329 (63-12) *Frequency Division with Blocking Oscillator Pulse-Transformers*, G. Hite, E. Whitham, H. Chance, Mar. 11, 1943. Div. 14-212.5-M3
- RL-330 (63-13) *Line-Controlled Blocking Oscillator Marker Generator ARO Calibrator*, A. H. Frederick, Apr. 8, 1943. Div. 14-212.5-M4
- RL-331 (63-14) *ARO Range Follow-up Unit*, J. R. Rogers, Mar. 19, 1943. Div. 14-214.3-M3
- RL-332 (63-15) *ARO Range Unit*, E. F. MacNichol, Jr., Apr. 9, 1943. Div. 14-243.2-M2
- RL-333 (63-16) *Model H Calibrator*, H. Chance, Apr. 1, 1943. Div. 14-251.2-M2
- RL-334 (63-17) *A Voltage-Compensated Delay Multivibrator*, C. R. Ahern, A. B. Jacobsen, B. Chance, Mar. 15, 1943. Div. 14-212.7-M3
- RL-335 (63-18) *Externally Triggered Circular-Sweep Amplifiers*, V. W. Hughes, P. F. Brown, May 6, 1943. Div. 14-241.3-M2
- RL-336 (63-19) *Calibrator for Low-Altitude Bombing Equipment*, J. W. Gray, June 1, 1943. Div. 14-329.14-M1
- RL-337 (63-20) *Delayed Sweep for SCR-582-X*, B. Chance, June 11, 1943. Div. 14-242.5-M2
- RL-338 (63-21) *An Adaptation of the Phantatron Delay Multivibrator Circuit to the SSA 7 Tube*, R. Kellner, V. Hughes, A. Berg, P. Hinkle, B. Chance, Aug. 21, 1943. Div. 14-212.7-M4
- RL-339 (63-22) *A Condenser Phase-Shifter Range Circuit with Sine-Wave Tracking Suitable for Microwave Height-Finding Stations*, A. H. Frederick, June 30, 1943. Div. 14-322.3-M2
- RL-340 (63-23) *Pulsed Oscillator and Phase Shifter*, C. R. Gamertsfelder, July 22, 1943. Div. 14-251.61-M1
- RL-341 (63-27) *Automatic Range and Azimuth Tracking while Scanning*, A. B. Jacobsen, F. B. Coffin, W. B. Jones, Jr., B. Chance, Aug. 30, 1943. Div. 14-234.33-M3
- (63-28) No report.
- RL-342 (63-29) *HX Range Unit for Navigation and Bombing*, H. J. Reed, A. H. Frederick, B. Chance, Aug. 23, 1943. Div. 14-243.2-M3
- RL-343 (63-30) *Type J and A Test Unit*, H. Reed, A. H. Frederick, B. Chance, Aug. 21, 1943. Div. 14-251.2-M3
- RL-344 (64-1) *Standing Wave Detector*, J. L. Lawson, May 5, 1942. Div. 14-252.1-M1
- RL-345 (64-2) *Elimination of the "Trombone" between Transmitter and Junction in a Duplexing System*, J. L. Lawson, May 4, 1942. Div. 14-233.43-M1
- RL-346 (64-3) *Measurement of Impedance with the Standing Wave Detector*, J. L. Lawson, May 18, 1942. Div. 14-252.1-M2
- RL-347 (64-4) *The TR Box*, J. L. Lawson, May 13, 1943. Div. 14-233.312-M1
- RL-348 (64-5) *Photography of Successive Pulse Reflections from a Moving Target*, J. L. Lawson, June 12, 1942. Div. 14-264-M1
- RL-349 (64-6) *Measurement of the Q-Value of a TR Box*, J. L. Lawson R. L. McCreary, July 13, 1942. Div. 14-233.312-M2
- RL-350 (64-7) *Comparison of Performance of 10-Cm and 3-Cm Advanced Development Systems*, D. Williams, July 13, 1942. Div. 14-121.2-M1
- RL-351 (64-8) *Altitude Determination by Means of a Vertical PPI*, D. Williams, July 31, 1942. Div. 14-242.3-M3
- RL-352 (64-9) *Direct Coupling in the T-R Box*, R. L. McCreary, Nov. 3, 1942. Div. 14-233.312-M3
- RL-353 (64-19) *Definition of Maximum Range on Aircraft and Its Quantitative Determination*, L. B. Linford, D. Williams, V. Josephson, W. Woodcock, Nov. 12, 1942. Div. 14-243-M1
- (64-11) No report.
- RL-354 (64-12) *Supplementary Report on Altitude Determination by Means of an Expanded Elevation Indicator, Vertical PPI*, L. Linford, D. Williams, V. Josephson, W. Woodcock, Dec. 2, 1942. Div. 14-322.3-M1
- RL-355 (64-13) *Performance of 3-Cm System, D2-1*, M. W. P. Strandberg, Jan. 6, 1943. Div. 14-121.2-M2
- RL-356 (64-14) *Time Fluctuations of a Rotary Spark-Gap Modulator*, L. Linford, D. Williams, V. Josephson, W. Woodcock, Dec. 18, 1942. Div. 14-231.23-M2
- RL-357 (65-1) *A Recent Prospectus with a Pictorial Brief of BGS*, A. Roberts, R. Whitmer, J. Sheridan, 1944. Div. 14-328.112-M3
- RL-358 (65-2) *BGS 10-Cm Radar Beacon*, R. M. Whitmer, J. M. Cunningham, June 1, 1943. Div. 14-328.112-M1
- RL-359 (72-1) *Maximum Power Limitations of Silicon Crystals*, B. Cork, Jan. 11, 1943. Div. 14-233.112-M3
- RL-360 (72-2) *Progress Reports on TR Tubes*, A. M. Stone, Jan. 11, 1943. Div. 14-233.31-M2
- RL-361 (72-3) *Transmission of Higher Harmonics through a TR Cavity*, H. Cork, Jan. 11, 1943. Div. 14-211.5-M2

CONFIDENTIAL

- RL-362 (72-4) *Some Experiments in Determining the Power Transmission and Recovery Time of TR Boxes*, B. Cork, Jan. 20, 1943. Div. 14-233.312-M5
- RL-363 (72-5) *Maximum Allowable Negative Rectifying after Pulses*, R. Rolfeeson, R. M. Ashby, Apr. 13, 1943. Div. 14-232.19-M3
- RL-364 (72-6) *Infinite Rejection Filters*, A. M. Stone, J. L. Lawson, June 1, 1943. Div. 14-241.7-M2
- RL-365 (72-7) *Recent Performance of the 3-Cm Advanced Development System*, D2-1, D. Williams, F. Martin, V. Josephson, June 21, 1943. Div. 14-310.14-M3
- RL-366 (73-1) *Microwave Linear Radiators*, L. W. Alvarez, July 31, 1942. Div. 14-234.6-M3
- RL-367 (81-1) *Conical Scanning*, R. S. Phillips, Aug. 4, 1942. Div. 14-234.321-M2
- RL-368 (81-2) *Report of AAB Test on XT-1 at Fort Monroe, Virginia, February-March, 1942*, A. H. Warner, July 30, 1942. Div. 14-244.21-M2
- RL-369 (81-3) *Modified Hanning Coarse*, R. S. Phillips, E. Pinney, Nov. 2, 1942. Div. 14-329.2-M1
- RL-370 (81-4) *Data on SCR-584 Control Equipment*, G. J. Plain, S. Godet, Dec. 17, 1942. Div. 14-323.31-M1
- RL-371 (81-5) *Analysis of Firing Tests on Mark 51, Dam Neck, Virginia*, E. J. Campbell, July 4, 1943. Div. 14-323.32-M1
- RL-372 (81-6) *Servomechanisms*, R. S. Phillips, May 11, 1943. Div. 14-214.3-M4
- (82-1, 2) See RL-30 (G-1) and RL-31 (G-2).
- RL-373 (82-3) *Performance Report of the High-Power Ground System*, E. C. Pollard, June 22, 1942. Div. 14-310.12-M2
- RL-374 (9-1) *Report on Aircraft Radio Sight*, Apr. 30, 1942. Div. 14-323.12-M2
- RL-375 (0-2) *Radar Target Contrast*, E. M. Lyman, J. J. Hibbert, June 2, 1942. Div. 14-122.113-M3
- RL-376 (9-3) *Airborne Radar Projects in Division 9*, Mar. 29, 1943. Div. 14-310.21-M1
- RL-377 (9-4) *Pictorial Brief of an Experimental AGL-1 Installation*, C. F. West, L. J. Laslett, G. Curran, [May 10, 1943]. Div. 14-234.122-M1
- RL-378 (91-1) *Tests on Radar Echoes from Cylinders*, R. W. Larson, R. F. Balmer, A. S. Meier, July 10, 1942. Div. 14-122.113-M4
- RL-379 (91-2) *Resistance-Capacitance Networks*, C. R. Wischmeyer, Sept. 22, 1942. Div. 14-212.8-M1
- RL-380 (93-1) *The Balancing of Spiral-Seam Spinners*, W. M. Cady, Sept. 9, 1942. Div. 14-234.325-M1
- RL-381 (93-2) *Photographs of the PPI Indicator Tube with 3-Cm ASV over Water and Land*, N. F. Ramsey, H. F. Balmer, E. A. Luebke, Oct. 27, 1942. Div. 14-242.3-M5
- RL-382 (93-3) *Photographic Polarization Tests*, C. A. Garrett, K. L. Mealey, May 7, 1943. Div. 14-123-M2
- RL-383 (10-1) *Survey of 10-Cm Radar Installation in PBM-1 Flying Boat*, J. F. Koehler, C. J. Taylor, May 1, 1942. Div. 14-310.211-M5
- RL-384 (10-2) *Comparison of Reflectivities of Approximately Similar Plastic and Metal Airplanes*, E. E. Miller and others, May 22, 1942. Div. 14-122.113-M2
- RL-385 (10-3) *Project Dolphin*, G. F. Duvall, May 29, 1943. Div. 14-323.5-M1
- RL-386 (102-1) *Development of a Flexible Relay Servo Mechanism and Application to Sector Scanning Spinner Controls*, E. E. Miller, May 29, 1942. Div. 14-214.3-M2
- RL-387 (102-2) *Tactical Devices Based on Superposition of a Plotting Board on the PPI Pattern*, E. E. Miller, Aug. 8, 1942. Div. 14-205-M1
- RL-388 (102-3) *Guarded Selsyns*, R. E. Meagher, M. D. McFarlane, Oct. 9, 1942. Div. 14-214.2-M3
- RL-389 (102-4) *Some Photographic Measures of PPI Linearity and Addendum*, N. U. Mayall, Dec. 22, 1942. Div. 14-242.3-M6
- RL-390 (102-5) *Vibration and Shock Comparison Tests of 7-In. Cathode-Ray Tubes in Two Different Type Mounts*, E. Pietz, M. D. Fagen, Mar. 23, 1943. Div. 14-242.21-M1
- RL-391 (103-1) *Operational Report on B-24, No. 1, in the British Isles, March to June, 1942*, G. A. Fowler, May 25, 1942. Div. 14-310.211-M7
- RL-392 (103-2) *Report on the First Radar System Installed on a K-Type Airship*, Sept. 25, 1942. Div. 14-310.211-M11
- RL-393 (103-3) *Comprehensive Report on USS Semmes Radar Installation*, R. M. Emberson, Oct. 8, 1942. Div. 14-310.31-M3
- (103-4 and 5) No reports.
- RL-394 (103-6) *Features and Operations of Radio Set SCR-582*, S. Seely, Feb. 15, 1943. Div. 14-321.3-M2
- (103-7) No report.
- RL-395 (103-8) *Laboratory and Field Tests with Stabilized Spinners*, R. W. Griffiths, Apr. 21, 1943. Div. 14-251.33-M2
- RL-396 (104-1) *Development of Antennas for Raytheon SO-COPY*, D. L. Jaffe, Feb. 25, 1943. Div. 14-234.121-M1

CONFIDENTIAL

PART II

RL-397 (105-1)	<i>AI-10 Trainer Simulation at I-F Level</i> , R. L. Garman, Aug. 26, 1942. Div. 14-411.21-M2	RL-415	Van Atta, G. G. Harvey, Aug. 12, 1943. Div. 14-591-M19
RL-398 (105-2)	<i>AI-10 Bench Trainer Simulation at Video Level</i> , R. L. Garman, Aug. 24, 1942. Div. 14-411.21-M1	RL-416	<i>LEASV (AN/AFA-2) Antenna</i> , L. Buchwalter, G. G. Harvey, Oct. 13, 1943. Div. 14-234.122-M2
RL-399 (105-3)	<i>Land Mass Simulator</i> , R. L. Garman, Aug. 26, 1942. Div. 14-412-M1	RL-417	<i>S/N Measurements on the CV-58</i> , E. Durand, Aug. 11, 1943. Div. 14-211.61-M2
RL-400	<i>Index of Regular Reports, Texts and Manuals</i> , Jan. 29, 1944. Div. 14-510-M1	RL-418	<i>Details of X-Band High-Level TR Tube Test Bench</i> , J. B. Wiesner, Feb. 3, 1944. Div. 14-233.31-M6
RL-401	<i>Overwater Observations at X and S Frequencies on Surface Targets</i> , O. J. Baltzer, Virgil A. Counter, W. M. Fairbank, W. O. Gordy, E. L. Hudspeth, July 26, 1943. Div. 14-122.113-M6	RL-419	<i>Supplement, A Relative Power Measurer for the TR Test Bench</i> , Mar. 24, 1944. Div. 14-252.4-M6
RL-402	<i>Corner Reflector Tests at Langley Field</i> , C. M. Gilbert, Aug. 6, 1943. Div. 14-267-M3	RL-420	<i>Range-Height Indicator</i> , R. W. Lee, Aug. 25, 1943. Div. 14-322.3-M3
RL-403	<i>Final Report on SRB's</i> , R. E. Hilder, Sept. 3, 1943. Div. 14-329.2-M2	RL-421	<i>Half Beacon Antenna</i> , A. Braunlich, Sept. 9, 1943. Div. 14-328.21-M2
RL-404	<i>RF Attenuators</i> , S. G. Sydoriak, Sept. 7, 1943. Div. 14-251.1-M3	RL-422	<i>Radar Detection of Ground Objects from the Ground</i> , J. A. Smith, Sept. 15, 1943. Div. 14-310.13-M1
RL-405	<i>Studies of British Phosphors of the Types C, H, K, and M</i> , W. B. Nottingham, Aug. 2, 1943. Div. 14-212.231-M7	RL-423	<i>Measurement of Electric Tuning Ranges of 707 Tubes</i> , J. S. Kirby-Smith, Aug. 17, 1943. Div. 14-241.41-M5
RL-406	<i>An Introduction to Microwave Propagation</i> , D. E. Kerr, P. J. Rubenstein, Sept. 16, 1943. Div. 14-122.1-M2	RL-424	<i>A Note on Pulse Distortion by Rejection Filters</i> , A. M. Stone, Sept. 16, 1943. Div. 14-124.2-M1
RL-407	<i>Search Scans and System Performance</i> , W. M. Cady, Aug. 9, 1943. Div. 14-234.31-M1	RL-425	<i>Sinusoidal Potentiometers Types RL10CB, RL10CD, RL10E, RL14</i> , P. Rosenberg, Aug. 16, 1943. Div. 14-211.3-M6
RL-408	<i>Comparison of the Usual Methods of Measuring Conversion Loss of Crystals and a New Empirical Method</i> , S. Roberts, C. A. Whitmer, Aug. 31, 1943. Div. 14-233.14-M3	RL-426	<i>Report on Type A and Type R Pulse Transmission Cables and Connectors</i> , H. J. White, J. R. Perkins, Sept. 11, 1943. Div. 14-233.411-M1
RL-409	<i>Potentiometer, Type RL-B, for Azimuth and Elevation Indication on Magnetically Deflected Cathode-Ray Tubes</i> , P. Rosenberg, July 15, 1943. Div. 14-211.3-M5	RL-427	<i>Report on Western Electric 717A Modulator Type D-150442 and Radio-Frequency Unit Type D-150452</i> , H. J. Hall, Feb. 28, 1944. Div. 14-233.2-M1
RL-410	<i>Bridge Methods in Low- and Medium-Level RF Power Measurement</i> , R. N. Griesheimer, Sept. 14, 1943. Div. 14-252.4-M5	RL-428	<i>One-sided Inductive Irises and Quarter-wave Capacitive Transformers in Waveguide</i> , W. Sichak, Nov. 17, 1943. Div. 14-233.423-M5
RL-411	<i>Antenna for High-Altitude Bombing, H2X</i> , A. S. Dunbar, Aug. 3, 1943. Div. 14-329.141-M1	RL-429	<i>Characteristics of Recent 729A Tubes (X-Band Local Oscillators)</i> , F. Bailey, D. Blaisdell, Sept. 4, 1943. Div. 14-241.41-M6
RL-412	<i>Adjustment of Magnetron Frequency by an External Tuner</i> , F. F. Rieke, Sept. 6, 1943. Div. 14-232.16-M2	RL-430	<i>Brief Description of MEW Microwave Early Warning</i> , E. G. Schneider, Sept. 7, 1943. Div. 14-322.1-M1
RL-413	<i>Measurements on 446 Lighthouse Tubes</i> , P. A. Cole, Aug. 39, 1943. Div. 14-232.2-M3	RL-431	<i>Lighthouse Tube Transmitter-Receiver, LHTR MK I</i> , H. L. Schultz, Sept. 10, 1943. Div. 14-310.212-M2
RL-414	<i>Report on the Microwave Antenna Conference July 19-24, 1943</i> , L. C.		<i>Aided Tracking</i> , A. Sobczyk, Sept. 17, 1943. Div. 14-244.3-M1
			<i>Reduction of Radar-Radio Interference from Modulators</i> , L. W. Mallach, Aug. 3, 1943. Div. 14-231.5-M1

CONFIDENTIAL.

- RL-432 *Measurement of Pressure in Gas Tubes by a Radio-Frequency Method*, M. L. Yeater, Sept. 9, 1944. Div. 14-252.3-M1
- RL-433 *Optical Theory of the Corner Reflector*, R. C. Spencer, Mar. 2, 1944. Div. 14-267-M5
- RL-434 *Synchro Test Equipment and Test Procedure*, I. Polk, Mar. 7, 1944. Div. 14-214.4-M2
- RL-435 *Amplidyne Servo for SCR-598 Surface Fire-Control Set*, C. W. Miller, Oct. 1, 1943. Div. 14-214.1-M2
- RL-436 *Radar Trainer Equation-Solvers for the Relative Motion of Two Moving Objects in Space*, R. L. Garman, M. R. Droz, H. A. Stafford, June 20, 1943. Div. 14-413-M1
- RL-437 *Training Apparatus for Radio Set SCR-584*, J. W. Stafford, Aug. 23, 1943. Div. 14-411.5-M1
- RL-438 *GCA, Ground Controlled Approach*, L. H. Johnston, Oct. 1, 1943. Div. 14-325.1-M1
- RL-439 *A Report on ASD-1 B-Scope Photography*, S. D. Bennett, Sept. 24, 1943. Div. 14-264-M2
- RL-440 *Low-Level Crystal Detectors, Effect of Heat and Cold*, R. Berman, Nov. 19, 1943. Div. 14-241.52-M1
- RL-441 *Analysis of Condenser Charging in Line-Type Modulators, Part 1, For Linear Reactor Elements*, H. J. White, Sept. 17, 1943. Div. 14-231.2-M3
- RL-442 *Contribution of the Dish to the Impedance of an Antenna*, S. Silver, Sept. 17, 1943. Div. 14-234.6-M6
- RL-443 *Simplified Measurement of Receiver Sensitivity, S-Band Noise Source*, M. C. Waltz, J. R. H. Kuper, Sept. 17, 1943. Div. 14-241.1-M1
- RL-444 *MHF Mobile Height Finder, Modified SCR-615*, W. M. Rieth, Sept. 20, 1943. Div. 14-322.1-M2
- RL-445 *Cold Resonance Theory of the Waveguide Tunnable Magnetron*, M. A. Herlin, Oct. 15, 1943. Div. 14-232.16-M3
- RL-446 *AN/APS-4, ASH, Trainer*, G. R. Paine, Sept. 29, 1944. Div. 14-411.1-M1
- RL-447 *The Effect of Atmospheric Refraction on Short Radio Waves*, John R. Freehafer, Nov. 29, 1943. Div. 14-122.12-M1
- RL-448 *A One-Tube, One-Scan Sector Scanner*, E. E. Miller, Dec. 6, 1943. Div. 14-214.2-M4
- RL-449 *The Identification of Signals as PPI Photographs for the Construction of Radar Maps*, N. U. Mayall, Oct. 20, 1943. Div. 14-242.4-M1
- RL-450 *Weight Analysis of Airborne Radar Sets*, W. L. Myers, Jan. 1, 1945. Div. 14-319.213-M1
- RL-451 *Analysis of Magnetron Performance, Part II, Detailed Study of the Operation of a Magnetron*, R. Platzman, J. E. Evans, F. F. Rieke, Mar. 3, 1941. Div. 14-232.1-M7
- RL-452 *Aided Tracking*, A. Sobczyk, Nov. 4, 1943. Div. 14-244.3-M2
- RL-453 *Aided Tracking*, R. S. Phillips, Nov. 3, 1943. Div. 14-244.3-M2
- RL-454 *Theory of Random Processes*, G. E. Uhlenbeck, Oct. 15, 1943. Div. 14-125-M7
- RL-455 *Probe-Fed Slots as Radiating Elements in Linear Arrays*, R. E. Clapp, Jan. 25, 1944. Div. 14-234.232-M1
- RL-456 *Brief Description of AN/TTC-1, AN/FPG-1, SCR-598, Developmental Seacoast Guiding Radar Sets*, H. A. Strauss, Oct. 8, 1943. Div. 14-323.4-M2
- RL-457 *Differential to Single Ended Potential Converters*, J. W. Gray, D. MacRae, Jr., Nov. 12, 1943. Div. 14-212.8-M4
- RL-458 *The Depolarization of Microwaves*, M. Kessler, C. E. Mandeville, E. L. Hudspeth, Nov. 1, 1943. Div. 14-123-M3
- RL-459 *Sinusoidal Potentiometers, Types RL11, RL15, RL204*, P. Rosenberg, Dec. 16, 1943. Div. 14-211.3-M7
- RL-460 *Ranchol, Microwave Beacon Equipment*, R. T. McCoy, Oct. 1, 1943. Div. 14-328.121-M1
- RL-461 *Simplified Methods of Field Intensity Calculations in the Interference Region*, W. T. Fishback, Dec. 8, 1943. Div. 14-111-M9
- RL-462 *The Cooling of Pressure-Tight Containers*, A. E. Vershow, E. L. Czajek, Mar. 14, 1944. Div. 14-224-M2
- RL-463 *Leakage Inductance and Distributed Capacitance of Various Types of Pulse-Transformer Windings*, P. R. Gillette, W. H. Rostiek, H. L. Rehkopf, Nov. 22, 1943. Div. 14-211.41-M4
- RL-464 *Tests on a M3B1 Oil Gear and an Amplidyne Servo for the SCR-598 Control Problem*, H. T. Marcy, C. W. Miller, Jan. 4, 1944. Div. 14-214.1-M3
- RL-465 *On the Fluctuations in Signals Returned by Many Independently Mov-*

CONFIDENTIAL

	ing Scatterers, A. J. F. Siegert, Nov. 12, 1943. Div. 14-122.113-M7	RL-481	<i>The Observation of RF Phase in Pulse Radar</i> , R. A. McConnell, A. G. Emslie, Dec. 23, 1943. Div. 14-264-M4
RL-466	<i>On the Appearance of the A-Scope when the Pulse Travels through a Homogeneous Distribution of Scatterers</i> , A. J. F. Siegert, Nov. 9, 1943. Div. 14-124.2-M2	RL-482	<i>Remote-Position Control by Direct-Frequency Variation</i> , D. L. Jaffe, Nov. 23, 1943. Div. 14-214.5-M1
RL-467	<i>Semi-automatic Tactical Plotting Board</i> , E. G. Martin, F. C. Hudson, Nov. 23, 1943. Div. 14-265.1-M1	RL-483-1	<i>Radome Bulletin No. 1</i> , E. B. McMillan, Dec. 2, 1943. Div. 14-234.5-M1
RL-468	<i>Propagation over Short Paths and Rough Terrain at 200 Mc</i> , A. B. Vane, D. G. Wilson, Jan. 18, 1944. Div. 14-122.121-M2	RL-483-2	<i>Radome Bulletin No. 2, An Outline of the Electric Properties of Radomes</i> , R. M. Redheffer, Dec. 20, 1943. Div. 14-234.5-M2
RL-469	<i>A Cathode Follower Employing Two Tubes to Obtain Extremely Low Output Resistance</i> , C. M. Hammaek, Nov. 10, 1943. Div. 14-212.8-M3	RL-483-3	<i>Radome Bulletin No. 3, Ice Formation on Shipborne Radomes</i> , J. S. White, Feb. 15, 1944. Div. 14-234.5-M3
RL-470	<i>Pulse-Transformer Core Material Measurements</i> , H. L. Rehkopf, W. H. Bostiek, P. R. Gillette, Dec. 10, 1943. Div. 14-211.41-M5	RL-483-4	<i>Radome Bulletin No. 4, Transmission and Reflection of Single Plane Sheets</i> , R. M. Redheffer, July 12, 1944. Div. 14-234.5-M4
RL-471	<i>Shielding of Microwave Receivers against Interference at Intermediate Frequencies</i> , B. Cork, Aug. 8, 1944. Div. 14-241.1-M5	RL-483-5	<i>Radome Bulletin No. 5, Recent Dielectric Constant and Loss Tangent Measurements</i> , E. M. Everhart, July 14, 1944. Div. 14-234.5-M5
RL-472	<i>Antenna Parts and Measuring Equipment</i> , T. W. Lashof, Nov. 5, 1943. Div. 14-234.23-M1	RL-483-6	<i>Radome Bulletin No. 6, Radomes and System Performance</i> , R. M. Redheffer, Nov. 17, 1944. Div. 14-234.5-M6
RL-473	<i>Magnetron Stabilizing Tuner</i> , W. M. Preston, J. B. Platt, Dec. 2, 1943. Div. 14-232.16-M4	RL-483-7	<i>Radome Bulletin No. 7, The Measurement of High Reflections at Low Power</i> , R. M. Redheffer, Nov. 20, 1944. Div. 14-234.5-M7
	Supplement, W. M. Preston, May 31, 1944. Div. 14-232.16-M6	RL-483-8	<i>Radome Bulletin No. 8, X-Band Sandwiches at Variable Angles of Incidence</i> , E. Everhart, Dec. 19, 1944. Div. 14-234.5-M8
RL-474	<i>Truck-Mounted SCR-582 MK III, a General-Purpose Microwave Set</i> , C. Hopkins, Oct. 27, 1943. Div. 14-310.11-M3	RL-483-9	<i>Radome Bulletin No. 9, The Matching of High Standing Wave Ratios</i> , R. M. Redheffer, Dec. 22, 1944. Div. 14-234.5-M9
RL-475	<i>Report on K-Band Work in U.S.A.</i> , B. Bieaney, Oct. 20, 1943. Div. 14-232.111-M2	RL-483-10	<i>Radome Bulletin No. 10, The Measurement of Small Reflections</i> , Y. Dowker, R. M. Redheffer, Feb. 6, 1945. Div. 14-234.5-M12
RL-476	<i>Climate in Relation to Microwave Radar Propagation in Panama</i> , A. E. Bent, Feb. 25, 1944. Div. 14-122.23-M2	RL-483-11	<i>Radome Bulletin No. 11, Electrical Properties of Double-Flat and Sandwich Radomes</i> , R. M. Redheffer, Feb. 1, 1945. Div. 14-234.5-M11
RL-477	<i>Overinterrogation Control of Microwaves Beacons</i> , I. Sudman, Dec. 11, 1943. Div. 14-328-M1	RL-483-12	<i>Radome Bulletin No. 12, Transmission and Reflection of Parallel Plane Sheets</i> , R. M. Redheffer, Jan. 26, 1945. Div. 14-234.5-M10
RL-478	<i>Preliminary Measurements of 10-Cm Reflection Coefficients of Land and Sea at Small Grazing Angles</i> , P. J. Rubenstein, W. T. Flahback, Dec. 11, 1943. Div. 14-122.11-M2	RL-483-13	<i>Radome Bulletin No. 13, Elliptical Polarization Produced by Streamlined Radomes</i> , R. M. Redheffer, Feb. 12, 1945. Div. 14-234.5-M13
RL-479	<i>Paraboloid Antenna Characteristics as a Function of Feed Tilt</i> , S. Silver, C. S. Pao, Feb. 10, 1944. Div. 14-234.21-M7	RL-483-14	<i>Radome Bulletin No. 14, An Investigation of R-F Probes</i> , Y. Dowker, R. M. Redheffer, Feb. 6, 1945. Div. 14-235-M1
RL-480	<i>The Detection of Moving Targets among Ground Clutter by Coherent Pulse Methods</i> , R. A. McConnell, Dec. 14, 1943. Div. 14-263.1-M1	RL-483-15	<i>Radome Bulletin No. 15, The Measurement of Dielectric Constants in the</i>

CONFIDENTIAL

- One-Centimeter Band, R. M. Redheffer, E. D. Winkler, May 11, 1945. Div. 14-234.5-M15
- RL-483-16 *Radome Bulletin No. 18, Some Electrical Aspects of Microwave Sandwich Radome Design*, E. R. Steeler, May 9, 1945. Div. 14-234.5-M14
- RL-483-17 *Radome Bulletin No. 17, Current Progress on R-F Research*, M. Hegarty, Y. Dowker, R. M. Redheffer, E. D. Winkler, May 10, 1945. Div. 14-234.52-M3
- RL-483-18 *Radome Bulletin No. 18, The Dependence of Magnetron Filling on Radome Shape and Orientation*, R. M. Redheffer, Mar. 1, 1946. Div. 14-234.6-M9
- RL-483-19 *Radome Bulletin No. 19, Dielectric Constant and Loss Tangent Computation*, Y. Dowker, Aug. 7, 1945. Div. 14-131.2-M3
- RL-483-20 *Radome Wall Reflections at Variable Angles of Incidence*, E. M. Everhart, Jan. 4, 1946. Div. 14-234.5-M17
- RL-483-21 No report.
- RL-483-22 *Transmission of Lossy Sandwiches*, Y. Dowker, Jan. 23, 1946. Div. 14-234.5-M20
- RL-483-23 No report.
- RL-483-24 No report.
- RL-483-25 *Dielectric Constants and Loss Tangents of Radome Materials*, T. J. Suen, E. M. Everhart, Jan. 11, 1946. Div. 14-234.5-M18
- RL-483-26 *Electrical Test Methods for Radomes*, H. A. Perry, Jr., Jan. 11, 1946. Div. 14-234.5-M19
- RL-484 *Lighthouse Tube Superradiative Receivers*, R. I. Jacobson, Jan. 11, 1946. Div. 14-211.42-M2
- RL-485 *Model 7, Experimental Hydragen Thyatron Modulator*, H. J. Hall, Feb. 25, 1944. Div. 14-231.221-M3
- RL-486 *A Simplified Search Antenna for Radio Set AN/MPN-1*, L. J. Chu, C. F. Porterfield, Jan. 1, 1945. Div. 14-234.123-M2
- RL-487 *Instruments and Methods for Measuring Temperature and Humidity in the Lower Atmosphere*, I. Katz, Apr. 12, 1944. Div. 14-122.2-M2
- RL-488 *Qualitative Survey of Meteorological Factors Affecting Microwave Propagation*, Isadore Katz, J. M. Austin, June 1, 1944. Div. 14-122.2-M3
- RL-489 *X-Band Horizontally Polarized Non-directional Antennas*, H. J. Riblet, Apr. 22, 1944. Div. 14-234.112-M1
- RL-490 *Results of Tests Performed on Synchro Units and Systems*, E. R. Perkins, Jan. 14, 1944. Div. 14-214.4-M1
- RL-491 *Light Mountain Radar Set*, A. Longacre, Dec. 10, 1943. Div. 14-322.1-M3
- RL-492 *Comparative Photographs of 1- and 5-Microsecond Signals*, P. J. Rice, Dec. 16, 1943. Div. 14-264-M3
- RL-493 *The Resonant Modes of Magnetron Cavities*, H. Goldstein, Dec. 14, 1943. Div. 14-232.17-M2
- RL-494 *The Theory of Corrugated Transmission Lines and Waveguides*, H. Goldstein, Apr. 3, 1944. Div. 14-233.41-M6
- RL-495 *Radar Tracking Analysis*, E. J. Campbell, Feb. 5, 1944. Div. 14-244.1-M1
- RL-496 *Operation of 1N2s Crystal Rectifiers*, S. Roberts, Dec. 14, 1943. Div. 14-233.134-M2
- RL-497 *The Range Calculator*, S. J. Mason, Dec. 20, 1943. Div. 14-112-M1
- RL-498 *Colloquium on Pulse-Transformer Design November 3-4, 1943*, P. R. Gillette, Editor, Jan. 15, 1944. Div. 14-211.41-M6
- RL-499 *Elements of Loran*, B. W. Sitterly, Mar. 8, 1944. Div. 14-327.1-M3
- RL-500 *Results of Tests on Use of Rebecca-Eureka by the Army Ground Force*, R. F. Rollman, July 26, 1944. Div. 14-328.113-M3
- RL-501 *Manufacturing Procedure for the Radiation Laboratory High Burn-out Crystals*, M. Fox, C. S. Pearsall, V. Powell, Dec. 21, 1943. Div. 14-233.134-M3
- RL-502 *The Two-Disc D-C Thermistor Bridge Circuit*, R. Krock, N. H. Painter, Jan. 12, 1944. Div. 14-252.42-M2
- RL-503 *Precise Navigation by Means of a Radar Map Superposed on the PPI*, E. E. Miller, D. B. McLaughlin, Apr. 7, 1944. Div. 14-327-M1
- RL-504 *Revertail Height Finder, AN/CPS-4*, A. R. Tobey, Dec. 16, 1943. Div. 14-322.1-M4
- RL-505 *A Method for Rekey Radar PPI Synchronization*, R. K. Musher, Apr. 20, 1944. Div. 14-266-M1
- RL-506 *SM Radar*, J. S. Hall, Nov. 15, 1943. Div. 14-322.2-M1
- RL-507 *V-Bum GC Radar*, A. Longacre, Aug. 6, 1943. Div. 14-322.1-M13
- RL-508-1 *Radio Set RHB, Section I, Technical Description of the Production Model Radio Set RHB, Section II, Adjustment and Alignment of Radio Set RHB*, E. M. Lyman, Editor, Jan. 17, 1944. Div. 14-329.2-M3
- RL-508-2 *Radio Set RHB, Section III, Glider Checkout Procedure*, P. R. Stout, F. C. McCoy, Jan. 21, 1944. Div. 14-329.2-M4

CONFIDENTIAL

RL-508-3	<i>Radio Set RHB, Section IV, RHB Test Equipment</i> , J. J. Ilibert, J. E. Ward, Jan. 27, 1944. Div. 14-251.9-M7	RL-524	<i>Stagger-Tuned I-F Amplifiers</i> , H. Wallman, Feb. 23, 1944. Div. 14-241.32-M4
RL-509	<i>Magnetron Starting Time</i> , K. R. More, H. A. Miley, Mar. 14, 1944. Div. 14-232.113-M6	RL-525	<i>Thyrists Bridge-Controlled Voltage Regulator</i> , H. E. Kallmann, Mar. 9, 1944. Div. 14-235.2-M2
RL-510	<i>Pulse-Length Discrimination in Beacons</i> , C. L. Longmire, Jan. 27, 1944. Div. 14-124.1-M1	RL-526	<i>Elimination of Ground Clutter</i> , E. C. Pollard, Mar. 13, 1944. Div. 14-263.1-M2
RL-511	<i>Adjustment of Loran Antennas and Antenna-Coupling Units at Frequencies between 1,700 and 2,000 Kilocycles</i> , A. J. Poté, Feb. 20, 1944. Div. 14-327.114-M7	RL-527	<i>Effect on Current Pulse of Resistance in Series with the Magnetron</i> , W. H. Bostick, Feb. 21, 1944. Div. 14-232.19-M11
RL-512	<i>Impedance Characteristics and Equivalent Circuits for Vertical Radiators</i> , R. B. Lawrence, A. J. Poté, Apr. 15, 1944. Div. 14-212.3-M1	RL-528	<i>The Effect on Noise Figure of Phasing the Gain Control on the First I-F Stage</i> , Y. Beers, A. B. Macnee, Mar. 9, 1944. Div. 14-241.32-M5
RL-513	<i>Pulse Transformers Designed at Radiation Laboratory and Produced by General Electric Company and Westinghouse Electric and Manufacturing Company</i> , P. R. Gillette, Jan. 19, 1944. Div. 14-211.41-M7	RL-529	<i>High Impedance Cable</i> , H. E. Kallmann, Mar. 13, 1944. Div. 14-233.411-M4
RL-514	<i>High-Ambient Life Test of an Oil-Filled Pulse Transformer</i> , H. R. Zeller, Jan. 19, 1944. Div. 14-211.41-M8	RL-530	<i>Bombing Errors</i> , E. H. B. Bartelink, A. J. F. Siegert, Feb. 16, 1944. Div. 14-329.15-M1
RL-515	<i>Proposed Method for Measuring Instantaneous Magnetron Input Impedance with the Aid of a Delay Network</i> , O. T. Fundingsland, Feb. 22, 1944. Div. 14-232.19-M12	RL-531	<i>Rotating Corrugated Eccentric Line Antennas</i> , L. Buchwalter, G. G. Harvey, June 13, 1944. Div. 14-234.122-M3
RL-516	<i>A Condenser Phase-Shifter Range Unit with Sine-Wave Tracking for AN/TPG-1, AN/PPG-1, SCR-598</i> , G. Hite, G. E. Whitham, Mar. 3, 1944. Div. 14-243.2-M4	RL-532	<i>Theoretical Calculation on Best Smoothing of Position Data for Gun-nery Prediction</i> , R. S. Phillips, P. R. Weiss, Feb. 16, 1944. Div. 14-244.4-M1
RL-517	<i>S-Band Horizontally Polarized Non-directional Antennas</i> , H. J. Riblet, Feb. 14, 1944. Div. 14-234.111-M1	RL-533	<i>Observations of Life Rafts Equipped with Corner Reflectors</i> , E. L. Hudspeth, J. P. Nash, Feb. 15, 1944. Div. 14-267.1-M1
RL-518	<i>Pulse Shapes and R-F Spectra for Combinations of Strouberg-Carlson Mark I and Mark II Modulators with 2J22, 2J21, and 725A Magnetrons</i> , G. N. Glasoe, Mar. 17, 1944. Div. 14-124.2-M3	RL-534	<i>Space Charge between Parallel Plane Grids</i> , J. K. Knipp, Mar. 22, 1944. Div. 14-113-M3
RL-519	<i>Aspen Airborne Antenna</i> , H. J. Riblet, Aug. 25, 1944. Div. 14-329.132-M9	RL-535	<i>A Hard-Tube Servoamplifier for Fractional Horsepower DC Motors</i> , W. K. Hodder, Mar. 14, 1944. Div. 14-214.3-M5
RL-520	<i>High-Frequency Characteristics of Resistors</i> , D. T. Drake, Mar. 9, 1944. Div. 14-211.1-M1	RL-536	<i>Polarization Studies at S and X Frequencies</i> , O. J. Baltzer, W. M. Fairbank, J. D. Fairbank, Mar. 14, 1944. Div. 14-123-M4
RL-521	<i>A Diode-Type Pulse Voltmeter</i> , O. T. Fundingsland, A. S. Jerrems, July 6, 1944. Div. 14-252.2-M1	RL-537	<i>Observations on Signal Stability at S and X Frequencies</i> , O. J. Baltzer, W. M. Fairbank, J. D. Fairbank, Mar. 14, 1944. Div. 14-322.1-M6
RL-522	<i>Tests of Beacon Receiver on V-Beau</i> , J. M. Sturtevant, Dec. 4, 1944. Div. 14-322.1-M8	RL-538	<i>Performance of Coupling for 1½-In. by 3-In. Waveguide</i> , H. F. Webster, Mar. 6, 1944. Div. 14-233.422-M10
RL-523	<i>Voltage Pulse Rate-of-Rise Measurements</i> , O. T. Fundingsland, July 10, 1944. Div. 14-252.2-M2	RL-539	<i>Stagger-Damped Double-Tuned Circuits</i> , H. Wallman, Mar. 23, 1944. Div. 14-212.2-M1
		RL-540	<i>A Range-Measuring System Using an RC Linear Sweep</i> , V. W. Hughes, Sept. 18, 1944. Div. 14-212.5-M6

CONFIDENTIAL

- RL-541 *An Automatic Frequency-Control and Frequency-Selection System for Magnetrons*, C. A. Helber, Apr. 27, 1944. Div. 14-232.15-M1
- RL-542 *Lighthouse RF Envelope Indicator*, P. A. Cole, J. B. H. Kuper, K. R. More, Apr. 7, 1944. Div. 14-251.9-M8
- RL-543 *Crystal Life Tests under Flat Pulses*, H. H. Huntington, Apr. 7, 1944. Div. 14-233.15-M4
- RL-544 *Frequency Division with Blocking Oscillators, Part I*, R. B. Woodbury, Apr. 10, 1944. Div. 14-212.5-M5
- RL-545 *The Evaluation of an Equivalent Circuit for a Pulse Transformer*, W. H. Bostick, P. R. Gillette, H. L. Rehkopf, H. R. Zeller, May 8, 1944. Div. 14-212.3-M3
- RL-546 *Analysis of the Influence of Pulse Transformers on Current Pulse Shape*, W. H. Bostick, P. R. Gillette, H. L. Rehkopf, H. R. Zeller, June 16, 1944. Div. 14-211.41-M9
- RL-547 *Microwave Transmission over Water and Land under Various Meteorological Conditions*, Pearl J. Rubenstein, Isadore Katz, L. J. Neelands, R. M. Mitchell, July 13, 1944. Div. 14-122.2-M4
- RL-548 *A Littlefuse Direct-Reading Wattmeter*, C. M. Sorvaag, Apr. 28, 1944. Div. 14-252.41-M7
- RL-549 *Model G, Modulator Performance Tests*, P. C. Bettler, Apr. 24, 1944. Div. 14-231.3-M5
- RL-550 *Equalized Delay Lines*, H. E. Kallmann, June 3, 1944. Div. 14-211.2-M2
- RL-551 *Nomograms for Computation of Modified Index of Refraction*, R. H. Burgoyne, Apr. 6, 1945. Div. 14-122.21-M2
- RL-552 *The Sealing of Air at Rotating Shafts and Joints*, A. I. Whalow, Apr. 18, 1944. Div. 14-225-M1
- RL-553 *Pulse Doppler for Detection of Moving Ground Targets*, R. F. Thomson, Apr. 21, 1944. Div. 14-310.13-M2
- RL-554 *An Airborne S-Band Radar for Rooster Operation*, E. R. Gaertner, June 28, 1944. Div. 14-328.121-M4
- RL-555 *Servos with Torque Saturation, Part I*, W. Hurewicz, N. B. Nichols, May 1, 1944. Div. 14-214.3-M17
- RL-556 *Fading Simulator*, W. Roth, May 10, 1944. Div. 14-412-M2
- RL-557 *Leaky Waveguide Rapid Scanner*, J. Steinberger, Nov. 18, 1944. Div. 14-234.322-M3
- RL-558 *A 60-Mc Parallel Schering Bridge*, Y. Beers, Apr. 22, 1944. Div. 14-261.1-M2
- RL-559 *Final Report on SMTR to January 1944*, C. F. Chubb, June 13, 1944. Div. 14-232.113-M7
- RL-560 *A Precision Plan-Position Indicator*, W. L. Flock, June 16, 1944. Div. 14-242.3-M10
- RL-561 *Wave Form Analysis*, O. Abblati, May 29, 1944. Div. 14-235.1-M6
- RL-562 *A Moving Target Selector Using Deflection Modulation on a Storage Mosaic*, R. A. McConnell, A. G. Emalie, F. Cunningham, June 6, 1944. Div. 14-263-M1
- RL-563 *A Precision X-Sweep Generator*, R. A. McConnell, May 23, 1944. Div. 14-242.5-M3
- RL-564 *Rieke Diagrams and Probe-Plate Plunger Charts of Lighthouse Tubes in a Re-entrant Cavity*, R. E. Taylor, July 3, 1944. Div. 14-241.42-M4
- RL-565 *Stabilized High Voltage Supply*, E. A. Holmes, May 19, 1944. Div. 14-235.1-M5
- RL-566 *N^o Gate Attachment for SCR-584*, J. S. White, R. B. Leuchman, May 3, 1944. Div. 14-243.21-M1
- RL-567 *Magnetron Tuning and Stabilization*, W. V. Smith, July 13, 1944. Div. 14-232.16-M7
- RL-568 *Further Measurements of 3- and 10-Cm Reflection Coefficients of Sea Water at Small Grazing Angles*, W. T. Fishback, P. J. Rubenstein, May 17, 1944. Div. 14-122.112-M1
- RL-569 *Preliminary Report on the Fluctuations of Radar Signals*, H. Goldstein, Y. D. Bales, May 16, 1944. Div. 14-122.114-M1
- RL-570 *Characteristics of Recent 72SA/B Tubes*, D. N. Sands, F. S. Bailey, May 18, 1944. Div. 14-241.41-M8
- RL-571 *Effect of Pulse Length on System Performance and Operation*, R. Rollefson, A. H. Nelson, L. A. Hartman, May 30, 1944. Div. 14-124.1-M2
- RL-572 *Clamping Tubes*, C. W. Sherwin, May 12, 1944. Div. 241.4-M3
- RL-573 *A Precision Self-Synchronous Range System for P-3*, G. Hite, G. E. Whitham, W. L. Flock, May 26, 1944. Div. 14-243.1-M3
- RL-574 *Vertebral Type Flexible Waveguide*, E. L. Younker, June 15, 1944. Div. 14-233.412-M16

CONFIDENTIAL

- RL-575 *Revision of General Radio Type 605-B Signal Generator for Pulsing*, C. E. Ingalls, June 13, 1944. Div. 14-251.6-M7
- RL-576 *A High Resolution K-Band Ship Search Set*, W. M. Fairbank, W. T. Harrold, G. D. Sheekels, J. D. Fairbank, Dec. 7, 1944. Div. 14-310.32-M2
- RL-577 *S-Beam End-Fire Array Antenna*, H. J. Riblet, H. L. Birchard, July 11, 1944. Div. 14-234.111-M2
- RL-578 *Accuracy Criteria for the Gun Director MK 56*, R. S. Phillips, C. H. Dowker, June 9, 1944. Div. 14-323.32-M2
- RL-579 *Medium Precision Range System for CXGQ, Project Henry*, G. Hite, Sept. 9, 1944. Div. 14-243.1-M4
- RL-580 *A Survey of High-Vacuum Diodes Used for Surge-Limiting Operation in Modulators*, S. J. Krulikoski, Jr., Sept. 5, 1944. Div. 14-211.61-M3
- RL-581 *Ultracompact Microwave Radar Beacons as Beam-Approach Aids in Aircraft Landing*, L. H. Orpla, July 4, 1944. Div. 14-325-M3
- RL-582 *Simple Computation of Distance on the Earth's Surface*, B. W. Sitterly, J. A. Pierce, July 8, 1944. Div. 14-112-M2
- RL-583 *BUPS (AN/UPN-1, 2) an Ultracompact S-Band Radar Beacon and Its Tactical Uses*, A. Roberts, June 24, 1944. Div. 14-328.121-M3
- RL-584 *An H-B Impact Predicting Computer Assuming Constant Indicated Airspeed for Use with AN/APS-15A Radar*, R. N. Close, June 23, 1944. Div. 14-329.144-M2
- RL-585 *Curves, Bends, and Twists in Rectangular Waveguide*, R. M. Walker, July 6, 1944. Div. 14-233.422-M11
- RL-586 *Effects of Variation of Vane Width and Cathode Size on the Operation of Magnetrons*, M. Healea, Aug. 1, 1944. Div. 14-232.113-M8
- RL-587 *Dielectric Windows in Waveguide*, R. M. Walker, June 23, 1944. Div. 14-233.423-M7
- RL-588 *Performance Characteristics of Army-Navy Preferred Type Electrostatic Cathode-Ray Tubes*, R. P. Abbenhouse, July 6, 1944. Div. 14-242.21-M3
- RL-589 *Summary of Life-Test Data on Sylvania 4C35 Hydrogen Thyatrons*, S. J. Krulikoski, Jr., Feb. 1, 1945. Div. 14-231.221-M5
- RL-590 *Siting and Range of Microwave Beacons*, W. M. Preston, July 5, 1944. Div. 14-328-M2
- RL-591 *Results of Field Tests on AN/UPN-1, -2 (Experimental Models of BUPS) at Boca Raton, Florida*, January-March, 1944, R. P. Ghelardi, Aug. 12, 1944. Div. 14-328.121-M6
- RL-592 *Servos with Torque Saturation, Part II*, W. Hurewicz, Sept. 28, 1944. Div. 14-214.2-M9
- RL-593 *Chemical Methods for Maintaining the Partial Pressure of Water Vapor in TR Tubes*, R. Levine, F. L. McMillan, Jr., July 13, 1944. Div. 14-233.81-M6
- RL-594 *The 1B27 TR Tube*, L. D. Smullin, H. A. Leiter, Oct. 4, 1944. Div. 14-233.81-M9
- RL-595 *The SCR-554 Plotting-Table System*, E. M. Lyman, July 3, 1944. Div. 14-265.3-M1
- RL-596 *Florida Tests on ROSEBUPS Against SCR-582, SCR-615, MEW*, R. P. Ghelardi, July 27, 1944. Div. 14-328.121-M5
- RL-597 No report.
- RL-598 *A Range Only Set for Close-in Seeing*, C. E. Mandeville, W. T. Harrold, July 13, 1944. Div. 14-310.32-M1
- RL-599 *Standards for Microwave Frequencies*, P. A. Hower, Aug. 17, 1944. Div. 14-121.2-M3
- RL-600 *GE GL2C40 Tant Grid Lighthouse Tubes*, P. A. Cole, Nov. 14, 1944. Div. 14-232.2-M4
- RL-601-1 *Antenna Measuring Equipment*, O. A. Tyson, Oct. 6, 1944. Div. 14-234.4-M6
- RL-601-2 *Antenna Measuring Equipment, High Power CW Transmitter for S-Band*, O. A. Tyson, Aug. 24, 1944. Div. 14-234.4-M5
- RL-601-3 *Antenna Measuring Equipment, 100-Db Linear Audio Amplifier*, O. A. Tyson, Aug. 23, 1944. Div. 14-234.4-M4
- RL-601-4 *Antenna Measuring Equipment, Automatic Antenna Pattern Recorder*, O. A. Tyson, Jan. 16, 1945. Div. 14-234.4-M7
- RL-602 *Statistics of Beacon Interrogation*, H. H. Bailey, Feb. 5, 1945. Div. 14-328-M3
- RL-603 *Measurements of the Attenuation of K-Band Waves by Rain*, G. T. Rado, Mar. 7, 1945. Div. 14-122.13-M4
- RL-604 *Vulva Stretching as a Method for Improving X-Band Beacon Reception*, T. H. Waterman, S. D. Bennett, Aug. 31, 1944. Div. 14-328.111-M3

CONFIDENTIAL

- RL-605 *Trigger Requirements of the 4C35 and 3C45 Hydrogen Thyatrons*, S. J. Krulikovskii, Jr., Aug. 31, 1944. Div. 14-231.221-M4
- RL-606 *A Description of AN/TPS-10 and Its Performance in Mountainous Terrain*, T. M. Moore, Aug. 3, 1944. Div. 14-322.1-M7
- RL-607 *Vixen X*, M. M. Mann, F. T. Worrell, F. Shoemaker, Dec. 15, 1944. Div. 14-329.145-M1
- RL-608 *Corner Reflectors for Life Rafts*, E. L. Hudspeth, J. P. Nash, Aug. 1, 1944. Div. 14-267.1-M2
- RL-609 *Cathodes for Pulsed Magnetrans, Part I, Correlations Between Oscillating and Diode Conditions*, E. A. Coomes, J. G. Buck, A. Fineman, Aug. 30, 1944. [See RL-683 for Part II.] Div. 14-232.143-M5
- RL-610 *Matching Resistance Curves by Means of Two Linear Ganged Potentiometers and a Three-Terminal Resistances Network*, N. H. Painter, Aug. 17, 1944. Div. 14-211.3-M8
- RL-611 *Testing of Fixed-Tuned, Low-Q, ATR Tubes*, L. D. Smullin, Dec. 6, 1944. Div. 14-233.32-M1
- RL-612 *Errors in Target Velocity Due to the Rolling and Pitching of the Ship*, W. Hurewicz, Aug. 28, 1944. Div. 14-600-M5
- RL-613 *Modification of the Amplifier of the AN/APN-2 to Give Sharp Cut-off Wide-Band Response*, H. Wallman, G. H. Suite, Sept. 18, 1944. Div. 14-241.3-M5
- RL-614 *Nomograms for Radar Bombing with the 100-Lb Practice Bomb M38A2*, W. M. Cady, Aug. 29, 1944. Div. 14-329.11-M1
- RL-615 *Low-Altitude Navigation Antennas Developed in Connection with AN/APN-10*, J. H. Gardner, Oct. 3, 1944. Div. 14-234.122-M5
- RL-616 *Effects of Line- and Cathode-Follower Terminations on Pulse Shape*, C. Butt, Sept. 11, 1944. Div. 14-124.2-M4
- RL-617 *Life Test of Contact Material on Standard Linear Wire-Wound Potentiometers*, F. E. Dole, Mar. 12, 1946. Div. 14-211.3-M9
- RL-618 *A Method of Virtual Displacements for Electrical Systems with Applications to Pulse Transformers*, P. D. Crout, Oct. 6, 1944. Div. 14-211.41-M10
- RL-619 *Energy Loss in Copper under Pulse Conditions*, W. H. Bostick, Dec. 22, 1944. Div. 14-211.4-M1
- RL-620 *Stability of Magnetrans Operated by Spark-Gap Modulators*, D. F. Winter, H. A. Miley, Oct. 9, 1944. Div. 14-231.23-M3
- RL-621 *Increasing Stability of Operation of 4J31, 35 Magnetrans in the AN/CPS-1 System*, D. F. Winter, H. A. Miley, K. R. More, Jan. 25, 1945. Div. 14-232.16-M8
- RL-622 *Influences of Pulse Transformer Design on 4J31, 35 Magnatron Stability*, D. F. Winter, H. A. Miley, Aug. 11, 1945. Div. 14-232.16-M9
- RL-623 *S-Band Vertically Polarized Non-directional Antennas*, H. J. Riblet, Dec. 20, 1944. Div. 14-234.111-M3
- RL-624 *K-Band Cmece² Antennas with a Line Source and Shaped Cylindrical Reflector*, W. Siehak, E. M. Purcell, Nov. 3, 1944. Div. 14-234.113-M1
- RL-625 *The Future of Hyperbolic Navigation*, J. A. Pierce, Aug. 18, 1945. Div. 14-327-M4
- RL-626 *An Extension of Lagrange's Equations to Electromagnetic Field Problems, Equivalent Networks*, P. D. Crout, Oct. 6, 1944. Div. 14-111-M10
- RL-627 *Comparison of Theoretical and Experimental Requirements for Microwave Beacon Transmitter Power and Receiver Sensitivity*, E. R. Gaertner, T. H. Waterman, H. S. Gardner, Jr., H. W. Grissler, Oct. 13, 1944. Div. 14-328.2-M2
- RL-628 *Analysis of Tracking Data, Description of Calculations*, P. A. Samuelson, Oct. 3, 1944. Div. 14-323.32-M3
- RL-629 *A Treatment of Echo-Box Problems by Lagrangian Procedures*, P. D. Crout, N. H. Painter, Jan. 13, 1945. Div. 14-251.3-M8
- RL-630 *Theory of Ringing Time of Tunable Echo Boxes*, A. Baños, Jr., Nov. 3, 1944. Div. 14-251.3-M6
- RL-631 *Design of an Improved X-Band Echo Box*, A. Baños, Jr., Dec. 7, 1941. Div. 14-251.3-M7
- RL-632 *Field Station for Antenna Measurements*, R. E. Hlatt, Feb. 26, 1945. Div. 14-234.4-M8
- RL-633 *Errors in the Condenser Type Continuous Phase Shifter*, G. R. Gamertsfelder, Dec. 6, 1944. Div. 14-243.22-M1
- RL-634 *Reduction of Power-Line Noise in Modulators*, G. J. Wheeler, Dec. 11, 1944. Div. 14-231.5-M2
- RL-635 *Linear Electric Scanner*, J. S. Foster, Jan. 6, 1945. Div. 14-234.324-M2
- RL-636 *Vertical Coverage of a 1½-Ft by*

CONFIDENTIAL

	<i>5-Ft Antenna Designed for SG-3 (Experimental Data Obtained with an SNB Aircraft as Target), C. E. Moore, R. W. Blue, Dec. 7, 1944.</i>	RL-645-13	<i>X-1 Error Integrator, W. Hodder, W. Roth, Nov. 27, 1945.</i>
	<i>Div. 14-234.121-M2</i>	RL-645-14	<i>N-1 IFF Unit, G. W. McClure, Mar. 22, 1946.</i>
RL-637	<i>Rentizability of Filters, H. Wailman, Dec. 8, 1944.</i>	RL-646	<i>Div. 14-412-M5</i>
	<i>Div. 14-241.7-M3</i>		<i>Div. 14-412-M8</i>
RL-638	<i>Crystal Detectors and the Crystal-Video Receiver, R. Heringer, Nov. 16, 1944.</i>	RL-647	<i>Parallel Plate Optics for Electrical Scanning, S. B. Myers, Dec. 15, 1944.</i>
	<i>Div. 14-233.12-M8</i>		<i>Div. 14-234.324-M1</i>
RL-639	<i>SG-1 Antenna Mark 2, R. W. Thickens, Jan. 9, 1945.</i>	RL-648	<i>Overlund Falcon, E. H. B. Bartelink, Feb. 7, 1945.</i>
	<i>Div. 14-234.121-M3</i>		<i>Div. 14-323.2-M8</i>
RL-640	<i>Antiaircraft Target Designation Equipment for Ships, R. W. Blue, C. E. Moore, Dec. 19, 1944.</i>	RL-649	<i>Electrical Design of the AN/TPS-10 Antenna, C. S. Pao, Dec. 28, 1944.</i>
	<i>Div. 14-323.32-M4</i>		<i>Div. 14-234.123-M4</i>
RL-641	<i>IR-38 (Pre-TR), L. D. Smullin, Dec. 5, 1944.</i>		<i>Over-Water Transmission Measurements, 1944, Part I, Preliminary Analysis of Radio and Radar Measurements, P. J. Rubenstein, Dec. 15, 1944.</i>
	<i>Div. 14-233.31-M16</i>	RL-650	<i>A Qualitative Analysis of Hysteresis in Reflex Oscillators, J. B. Garrison, Feb. 4, 1946.</i>
RL-642	<i>Design of a 4-Ft Corner Reflector for K-Band, E. G. Martin, Aug. 20, 1945.</i>		<i>Div. 14-241.413-M9</i>
	<i>Div. 14-267-M6</i>	RL-651	<i>Modified Index Distribution Close to the Ocean Surface, R. B. Montgomery, R. H. Hargoyne, Feb. 16, 1945.</i>
RL-643	<i>The Use of the Mugie Tee Microwave Bridge in Measuring Impedance, R. L. Kyhl, Dec. 12, 1944.</i>		<i>Div. 14-122.24-M1</i>
	<i>Div. 14-252.1-M6</i>	RL-652	<i>Frequency — Wavelength Conversion Tables, E. DeAmicis, Jan. 4, 1945.</i>
RL-644	<i>Dielectric Properties of Water and Ice at K-Band, E. L. Younker, Dec. 4, 1944.</i>		<i>Div. 14-112-M4</i>
	<i>Div. 14-131.14-M1</i>	RL-653	<i>Flared Box Horn, S. J. Mason, July 9, 1945. [Report Withdrawn.]</i>
RL-645-1	<i>QA-2B Servoductor, W. Roth, Dec. 16, 1944.</i>		<i>Rotating Corner Reflectors for Ship Identification, J. M. Sturtevant, Jan. 1, 1945.</i>
	<i>Div. 14-214.3-M16</i>	RL-654	<i>Div. 14-267.1-M3</i>
RL-645-2	<i>Q1-2 and Q-3 Servoamplifier, R. U. Nathe, W. Roth, Sept. 25, 1945.</i>		<i>Shaping the Primary Pattern of a Horn Feed, C. S. Pao, Jan. 22, 1945.</i>
	<i>Div. 14-214.3-M12</i>	RL-655	<i>Div. 14-234.21-M9</i>
RL-645-3	<i>H-3 Trigger Unit, S. B. Cohen, Feb. 22, 1945.</i>		<i>Characteristics of Horn Feeds on Rectangular Waveguide, J. R. Risser, Dec. 28, 1945.</i>
	<i>Div. 14-412.2-M1</i>		<i>Div. 14-233.412-M25</i>
RL-645-4	<i>The I-3 Signal Unit, S. B. Cohen, May 23, 1945.</i>	RL-656	<i>No report.</i>
	<i>Div. 14-412.1-M1</i>		<i>A Microfilm Chart Projector for Radar Navigation, D. B. McLaughlin, C. A. Smith, Jan. 23, 1945.</i>
RL-645-5	<i>The J-2 Modulator Unit, E. M. Jones, July 19, 1945.</i>		<i>Div. 14-327-M2</i>
	<i>Div. 14-412-M3</i>	RL-657	<i>SU-2 Antenna—Shipborne Stabilized Radar Antenna for Sea Search, T. J. Keary, J. I. Bohnert, Mar. 7, 1945.</i>
RL-645-6	<i>The H-2 Trigger Unit, S. B. Cohen, Aug. 7, 1945.</i>		<i>Div. 14-234.112-M4</i>
	<i>Div. 14-412.2-M2</i>	RL-658	<i>SU-2 Antenna—Line-of-Sight Stabilization of a Radar Beam by Reflector Tilt, J. I. Bohnert, T. J. Keary, Feb. 19, 1945.</i>
RL-645-7	<i>I-2 Signal Unit, S. R. Cohen, Aug. 30, 1945.</i>		<i>Div. 14-234.112-M3</i>
	<i>Div. 14-412.1-M2</i>	RL-661	<i>Reflections from Smooth-Curved Surfaces, R. C. Spencer, Jan. 26, 1945.</i>
RL-645-8	<i>The R-1 and the R-2 Crystal Drivers, S. Frankel, Feb. 4, 1946.</i>		<i>Div. 14-122.111-M1</i>
	<i>Div. 14-422.1-M5</i>	RL-662	<i>A Microwave Frequency Discriminator, R. V. Pound, Aug. 4, 1945.</i>
RL-645-9	<i>The ML-1A, ML-1B, and ML-3A Course Mechanisms, C. M. Connelly, Lieutenant J. R. Higley, Nov. 28, 1945.</i>		<i>Div. 14-212.8-M7</i>
	<i>Div. 14-412-M6</i>	RL-663	<i>Frequency Drift of Certain X-Band</i>
RL-645-10	<i>S-2, S-2B, S-3, S-4, S-4B Motor Control Units, C. M. Gilbert, Feb. 11, 1946.</i>		
	<i>Div. 14-412.3-M1</i>		
RL-645-11	<i>The S-5 and S-5B Motor Control Units, Lieutenant J. B. Higley, Feb. 25, 1946.</i>		
	<i>Div. 14-412.3-M2</i>		
RL-645-12	<i>The U-1 and U-2 Pre-amplifier Units, S. Frankel, Dec. 14, 1945.</i>		
	<i>Div. 14-422.1-M4</i>		

CONFIDENTIAL

- RL-664 *Magnetrons*, K. R. More, W. W. Mathison, Jan. 23, 1945. Div. 14-232.112-M5
- RL-665 *Further Theoretical Investigations on the Atmospheric Absorption of Microwaves*, J. H. Van Vleck, Mar. 1, 1945. Div. 14-122.13-M3
- RL-666 *Stabilized SG-3 Antenna*, J. I. Bohnert, H. Krutter, Feb. 7, 1945. Div. 14-234.121-M4
- RL-667 *Equivalent Circuit of a Pulse-Transformer Core*, H. L. Rehkopf, Mar. 20, 1945. Div. 14-212.3-M3
- RL-668 *A Feedback Circuit for Measuring Output Noise Ratio of Crystal Rectifiers*, S. Roberts, Jan. 10, 1945. Div. 14-233.131-M3
- RL-669 *A Conversion Loss Set for Testing K-Band Crystal Rectifiers*, C. A. Whitmer, Jan. 16, 1945. Div. 14-233.152-M3
- RL-670 *A Simple Trainer for GCA Approach Controller*, C. M. Gillert, G. F. Tape, C. R. Haupt, Jan. 24, 1945. Div. 14-325.1M3
- RL-671 *Identification of GCA Search Targets*, B. F. Greene, Jan. 10, 1945. Div. 14-325.1-M2
- RL-672 *Theory of Radar Return from the Schnorkel*, P. M. Marcus, Jan. 15, 1945. Div. 14-321.12-M3
- RL-673 *Block Matrix—Coincident Cross-Band Transponder for S-Band Radar [AEW]*, C. E. Stone, G. D. Perkins, H. J. Lipkin, M. D. O'Day, Dec. 28, 1944. Div. 14-321.14-M4
- RL-674 *Data Smoothing*, F. P. Caffa, P. D. Crout, F. E. Bothwell, Jan. 23, 1945. Div. 14-244.4-M2
- RL-675 *Deflection Yoke Design Information*, R. D. Rawcliffe, Feb. 23, 1945. Div. 14-242.24-M4
- RL-676 *Low-Power RF Switch*, A. M. Stone, Feb. 23, 1945. Div. 14-233.424-M1
- RL-677 *The Trainer for Radar Set AN/MPN-1*, C. R. Haupt, May 25, 1945. Div. 14-411.3-M2
- RL-678 *Tests on the Performance of the Mk 1 Mod 7 Computer*, P. R. Weiss, R. L. Kennigott, Apr. 24, 1945. Div. 14-323.32-M5
- RL-679 *Plan Position Indicator for 584 AJ*, M. A. Starr, Feb. 8, 1945. Div. 14-242.3-M11
- RL-680 *Information on Radiation Laboratory Paraboloid Reflectors*, T. W. Lashof, Jan. 23, 1945. Div. 14-234.231-M3
- RL-681 *Theory of Characteristic Functions in Problems of Anomalous Propagation*, W. H. Furry, Feb. 28, 1945. Div. 14-122.12-M2
- RL-682-1 *TFX-29RL Frequency Comparator*, L. G. Mann, Feb. 16, 1945. Div. 14-251.41-M2
- RL-682-2 *Dissipation in Series Gaps and Voltage-Current Relationships during the Discharge*, J. R. Dillinger, Aug. 31, 1945. Div. 14-231.21-M8
- RL-682-3 *Division of Voltage Across Series Spark Gaps in a Line-Type Modulator*, J. R. Dillinger, F. K. Bothwell, Dec. 11, 1945. Div. 14-231.21-M11
- RL-682-4 *General Characteristics of Enclosed Spark Gaps with Emphasis on Aluminum Cathode Type Series Gaps*, J. R. Dillinger, Jan. 30, 1946. Div. 14-231.21-M13
- RL-682-5 *Some Characteristics of the 1B41, 1B45, and 1B49 Series Spark Gaps*, J. R. Dillinger, Mar. 19, 1946. Div. 14-231.21-M15
- RL-682-6 *Operation of Slotted Iron Sponge-Mercury Cathode-Type Series Gaps at SCI, AEW, and 5-Microwave Conditions*, J. R. Dillinger, Jan. 16, 1946. Div. 14-231.21-M12
- RL-683 *Line-Type Modulator and HP10V Magnetron Operation at 6 Megawatts*, J. R. Dillinger, Jan. 11, 1946. Div. 14-231.2-M5
- RL-684 *Cathodes for Pulsed Magnetrons, Part II, Construction and Performance of Pulsed Cathodes*, K. A. Coomes, J. G. Buck, A. S. Eisenstein, A. Fineman, Jan. 31, 1945. Div. 14-232.141-M3
- RL-685 *The Absorption of One-Half Centimeter Electromagnetic Waves in Oxygen*, E. R. Beringer, Jan. 26, 1945. Div. 14-122.13-M2
- RL-686 *A Low-Drag Beacon Antenna for Fighter Aircraft*, A. S. Dunbar, M. E. Van Valkenburg, Apr. 28, 1945. Div. 14-234.111-M5
- RL-687 *Primary Feeds in Cylindrical Paraboloids*, G. J. Yevick, Apr. 23, 1945. Div. 14-234.21-M10
- RL-688 *Some Automatic Frequency Control Circuits*, M. W. P. Strandberg, Mar. 10, 1945. Div. 14-232.15-M2
- RL-689 *The SCI Rapid Scan Height-Finding Antenna*, C. V. Robinson, M. A. Taggart, M. D. Pearson, July 9, 1945. Div. 14-234.121-M5
- RL-690 *Radar Returns from Precipitation Layers*, A. K. Bent, Aug. 20, 1945. Div. 14-122.23-M5
- RL-691 *Horn Feeds for Parabolic Antennas*, S. J. Mason, Jan. 22, 1946. Div. 14-234.21-M12

CONFIDENTIAL

- RL-691 *Double-Curvature Surfaces for Beam Shaping with Point-Source Feeds*, S. Silver, June 15, 1945. Div. 14-122.111-M2
- RL-692 *Colloquium on Pulse-Forming Networks, October 12, 1944*, P. R. Gillette, R. H. Blythe, Editors, Mar. 14, 1945. Div. 14-212.4-M3
- RL-693 *A Proposed Standard Test Cavity for the 707B Tube*, J. B. H. Kuper, P. A. Cole, Mar. 15, 1945. Div. 14-211.5-M5
- RL-694 *Frequency Discontinuities of Local Oscillator Tubes Due to High-Q Load Circuits*, R. V. Pouad, Feb. 27, 1945. Div. 14-241.41-M9
- RL-695 *Analysis of Over-Water Tracking*, E. J. Campbell, Feb. 12, 1945. Div. 14-244.2-M2
- RL-696 *A Treatment of Echo-Bug Problems by Lagrangian Procedures, Part II*, P. D. Crout, N. H. Paiater, Mar. 16, 1945. Div. 14-251.3-M9
- RL-697 *The Regulation Obtainable in the Operation of a Hard-Tube Modulator with Magnetron Load*, G. N. Glasow, Feb. 20, 1945. Div. 14-231.1-M3
- RL-698 *Calculation of Pulse-Forming Networks Having Slow Rates of Voltage Rise*, A. Walter, Mar. 12, 1945. Div. 14-212.4-M2
- RL-699 *Loss-Noise Replacement Pre-amplifier for the SCR-584 (BC-1408)*, C. P. Gadsden, Mar. 1, 1946. Div. 14-241.3-M8
- RL-700 *The Effect of Clutter Fluctuations on MTI*, M. Goblstein, Dec. 27, 1945. Div. 14-263.1-M4
- RL-701 *Stable Scanners and Unsteady Airplanes*, W. M. Cady, Feb. 21, 1945. Div. 14-234.31-M2
- RL-702 *Field Intensity Contours in Generalized Coordinates*, H. Dodson, J. Gill, B. Howard, May 2, 1945. Div. 14-122.24-M3
- RL-703 *Overwater Tests of S-Band Early Warning for Ships, Vertical Coverage of the CNHR (SCI) Search System*, W. O. Gordy, D. T. Drake, M. Keasler, Mar. 5, 1945. Div. 14-322.2-M2
- RL-704 *Pulse Characterization of Common Receiver-Type Tubes*, R. B. Woodbury, Apr. 30, 1945. Div. 14-241.4-M4
- RL-705 *Matchmeter*, H. E. Kallmann, Apr. 9, 1945. Div. 14-251.9-M9
- RL-706 *Altitude Return in the AN/APS-6*, E. W. Cowan, Mar. 26, 1945. Div. 14-234.325-M2
- RL-707 *Sea-Return Effects and Their Elimination in the AN/APS-6*, E. W. Cowan, June 11, 1945. Div. 14-234.325-M3
- RL-708 *Synthetic Radar Echoes in the Presence of Jamming*, A. M. Stone, June 22, 1945. Div. 14-262.1-M4
- RL-709 *Notes on the Reflex Oscillator*, J. K. Knipp, May 3, 1945. Div. 14-241.415-M3
- RL-710 *BUPN (AN/UPN-3, 4, AN/APN-11), Ultramobile X-Band Radar Beacons and Their Tactical Uses*, H. L. Garfield, May 18, 1945. Div. 14-328.111-M7
- RL-711 *Nonlinear Networks as Voltage Regulators*, H. E. Kallmann, May 21, 1945. Div. 14-212.6-M6
- RL-712 *Flight Behavior of the Flux Gate and Gyroscopic Compasses and Their Effects on GPI*, W. J. Tull, Apr. 30, 1945. Div. 14-329.142-M3
- RL-713 *Front-Line Demarcation and Bombing with the Aid of Lightweight X-Band Beacons (BUPN)—A Log of Tactical Tests*, October, 1944-February, 1945, R. P. Ghelardi, Apr. 17, 1945. Div. 14-328.111-M6
- RL-714 *Micro-H*, E. R. Lyman, J. B. Platt, Apr. 16, 1945. Div. 14-329.12-M5
- RL-715 *Tokyo H2X Photographs—Comparison of Operational PPI Photographs with PPI Predictions of the Ultrasonic Radar Trainer*, P. Roseberg, Mar. 24, 1945. Div. 14-411.11-M5
- RL-716 *Link Conversion Unit for Ground-Controlled Approach Trainer*, C. M. Gilbert, C. R. Haupt, May 7, 1945. Div. 14-411.3-M1
- RL-717 *Notes on Load Effects in Reflex Oscillators*, J. B. H. Kuper, M. C. Waltz, May 29, 1945. Div. 14-241.413-M4
- RL-718 *Memorandum on the Activation of Various Surfaces by Evaporation from a Heated Oxide Cathode*, E. A. Coomes, May 11, 1945. Div. 14-232.141-M4
- RL-719 *A Theoretical Treatment of Radar Target Return, Part I*, P. D. Crout, F. E. Bothwell, Aug. 31, 1945. Div. 14-122.113-M8
- RL-720 *Surface Coverage of Some Shipborne Radar Sets on S, N, and K-Bands*, J. D. Fairbank, W. M. Fairbank, June 15, 1945. Div. 14-310.32-M4
- RL-721 *On Servos with Pulsed Error Data*, W. Hurewicz, Apr. 26, 1945. Div. 14-214.3-M11
- RL-722 *Pulse Transformer Committee Standard Test Methods for Pulse Transformer Cores*, W. H. Bostick, May 5, 1945. Div. 14-211.41-M11

CONFIDENTIAL

- RL-723 *K-Band High-Power Water Load*, R. M. Walker, May 10, 1945. Div. 14-234.232-M2
- RL-724 *Design Considerations for Directional Couplers*, R. J. Harrison, Dec. 31, 1945. Div. 14-233.422-M17
- RL-725 *P41, Photographic Projection PPI*, L. L. Blackmer, Apr. 26, 1945. Div. 14-242.32-M1
- RL-726 *Waveguides without Metal Walls*, R. M. Whitmer, May 10, 1945. Div. 14-233.412-M18
- RL-727 *Flight Tests of Block I Relay Radar System*, R. M. Alexander, Apr. 24, 1945. Div. 14-266-M2
- RL-728 *Echoes from Tropical Rain on X-Band Airborne Radar*, A. E. Bent, June 15, 1945. Div. 14-122.23-M3
- RL-729 *An Aerial Investigation of K-Band Radar Performance under Tropical Atmospheric Conditions*, R. S. Bender, A. E. Bent, J. W. Miller, Oct. 1, 1945. Div. 14-122.23-M6
- RL-730 *Two Proposed Methods of Recording the Position of a Moving Link Crab*, G. W. McClure, June 20, 1945. Div. 14-411.3-M3
- RL-731 *Experiments in Microwave Breakdown*, D. Q. Posin, I. Mansur, H. F. Clarke, Nov. 28, 1945. Div. 14-121.1-M6
- RL-732 *Operational Characteristics of 2C48 Tubes as Pulsed Oscillators in a Resonant Cavity*, M. E. Gardner, June 15, 1945. Div. 14-241.42-M5
- RL-733 *A Theory of a Supersonic Delay Line*, V. Hughes, Sept. 15, 1945. Div. 14-211.2-M3
- RL-734 *Equivalent Network for the 235-BW Pulse Transformer Based on the Method of Virtual Displacements*, F. E. Rothwell, July 2, 1945. Div. 14-211.41-M13
- RL-735 *The Relation Between Absorption and the Frequency Dependence of Refraction*, J. H. Van Vleck, May 28, 1945. Div. 14-122.24-M4
- RL-736 *Double Coaxial Coupler for BUN Antenna*, R. M. Fano, May 28, 1945. Div. 14-234.112-M8
- RL-737 *The Use of a Twin-T Network in a Selective Frequency Amplifier, with Special Applications*, R. M. Walker, H. Fleisher, May 19, 1945. Div. 14-241.32-M6
- RL-738 *A Wide-Excursion Frequency-Modulated Alignment Oscillator or Wokkulator*, H. L. Johnson, May 31, 1945. Div. 14-241.41-M10
- RL-739 *Flight Tests of AEW Block III Relay Liak*, J. B. Hursh, June 21, 1945. Div. 14-321.14-M9
- RL-741 *Synchro Units and Their Characteristics*, E. R. Perkins, June 27, 1945. Div. 14-214.4-M3
- RL-742 *Range-Altitude Coverages of Shipborne Microwave Search Radars*, R. W. Blue, July 2, 1945. Div. 14-321.2-M2
- RL-743 *Operation and Testing of Reflex Oscillators*, J. C. Slater, June 18, 1945. Div. 14-241.413-M5
- RL-744 *The Storage of Video Signals on Simple Monies*, R. A. McConnell, Feb. 18, 1946. Div. 14-234.33-M5
- RL-745 *An Experimental MTI System*, R. A. McConnell, Apr. 18, 1946. Div. 14-263-M14
- RL-746 *A Measurement of Supersonic Velocity in Mercury at 15 Mc/s as a Function of Temperature*, R. I. Jacobson, Sept. 20, 1945. Div. 14-252.2-M3
- RL-747 *Receiver Noise Figures and Their Measurement*, Y. Bowers, July 2, 1945. Div. 14-241.1-M6
- RL-748 *Relay Data Including Shock and Vibration Measurements*, H. W. Baur, Aug. 1, 1945. Div. 14-252.5-M1
- RL-749 *An Electronic Modulator for C-W Magnetrons*, A. Raños, Jr., D. S. Saxon, June 26, 1945. Div. 14-231.4-M5
- RL-750 *Interference Blanker*, R. Hull, June 20, 1945. Div. 14-262.1-M3
- RL-751 *Calculation of Vertical Polar Diagrams and Power Gains of Antennas for Airborne Navigational Radars*, T. J. Keary, Sept. 10, 1945. Div. 14-234.4-M9
- RL-752 *APQ-13 60-Inch Antenna*, W. Schak, Aug. 1, 1945. Div. 14-234-122-M6
- RL-753 *MTI for MEW*, G. M. Nonnemaker, May 24, 1945. Div. 14-263-M4
- RL-754 *Analysis of the Tracking of the 584 X-Band System*, C. D. Boyd, June 12, 1945. Div. 14-244.2-M3
- RL-755 *Attenuation of RG-9/U Cable as a Function of Temperature and Frequency in the X-Band*, F. E. Ehlers, June 18, 1945. Div. 14-233.411-M5
- RL-756 *A/R Range Scope*, P. F. Brown, A. H. Fredrick, W. E. Henry, June 29, 1945. Div. 14-243.1-M5
- RL-757 *No report. Measurements and Waveforms Obtained with SCR-598 Modulator*, G. Knight, Nov. 29, 1945. Div. 14-231.1-M4

CONFIDENTIAL

- RL-758 *General Theory of Electronic Beam Modulators*, D. S. Saxon, Mar. 15, 1946. Div. 14-231.4-M8
- RL-759-1 *AN/APG-TI Training Equipment*, G. R. Falne, July 28, 1945. Div. 14-411.22-M3
- RL-759-2 *AN/APG-15 Modification Kit for AN/APG-TI Training Equipment*, G. R. Falne, Aug. 30, 1945. Div. 14-411.22-M4
- RL-760 *Parallel Plate Bends*, M. A. Taggart, E. C. Find, Aug. 28, 1945. Div. 14-233.422-M13
- RL-761 *The Temperature-Limited Diode*, J. K. Kaipp, Jan. 31, 1946. Div. 14-211.61-M4
- RL-762-1 *Fourier Integral Methods of Analysis*, R. C. Spencer, Jan. 21, 1946. Div. 14-112-M8
- RL-762-2 *Tables and Methods of Calculation for Line Sources*, R. C. Spencer and P. M. Austin, Mar. 30, 1946.
- RL-763-0 *The AN/APG-30 Series*, G. F. Wheeler, D. Halliday, Aug. 15, 1945. Div. 14-329.13-M1
- RL-763-1 *The AN/APG-31 System*, R. E. Hillger, Apr. 1, 1946. Div. 14-329.13-M5
- RL-763-2 *The AN/APG-32*, G. F. Wheeler, Sept. 25, 1945. Div. 14-329.13-M2
- RL-763-3 *The AN/APG-33*, R. Blythe, Feb. 28, 1946. Div. 14-329.13-M4
- RL-763-4 *The AN/APG-34*, R. E. Hillger, Apr. 10, 1946. Div. 14-329.13-M6
- RL-764 *Low-Voltage K-Band Oscillator*, H. V. Neher, Sept. 17, 1945. Div. 14-241.411-M8
- RL-765 *Analysis of Line Modulator Behavior with a Sparking Magnetron Load*, A. Walter, O. T. Fundingsland, Aug. 10, 1945. Div. 14-231.2-M4
- RL-766 *Radar Camouflage*, M. M. Andrew, O. J. Baltzer, E. L. Hudspeth, C. E. Mandeville, July 16, 1945. Div. 14-262.2-M1
- RL-767 *Tests of a Type C Data Presentation with a Spiral-Scan Aircraft-Interception System*, K. W. Cowan, July 8, 1945. Div. 14-326-M5
- RL-768 *AN/APG-10, a Lightweight X-Band Search Set*, A. Longacre, H. L. Schultz, Aug. 20, 1945. Div. 14-321.1-M2
- RL-769 *Quarter-Wave Plate for Broad Band Circular Polarization*, J. E. Eaton, J. Steinberger, Jan. 28, 1946. Div. 15-234.22-M9
- RL-770 *Broad-Band Coaxial-Line Horn*, J. Steinberger, July 20, 1945. Div. 14-233.413-M8
- RL-771 *K-Band Linear Array*, J. Steinberger, E. B. Chisholm, Jan. 31, 1946. Div. 14-234.232-M3
- RL-772 *Slotted Dipole Impedance Theory*, H. J. Riblet, Nov. 21, 1945. Div. 14-113-M5
- RL-773 *Fluctuations in the Return Signals from Random Scatterers*, A. J. F. Siegert and Franck W. Martin, Jan. 24, 1946. Div. 14-122.114-M2
- RL-774 *Electronic Tuning of Reflex Oscillators*, J. B. H. Kuper, D. S. Beers, Aug. 1, 1945. Div. 14-241.411-M7
- RL-775 *Double Reflector Antenna for High-Altitude Bombing*, E. B. Chisholm, H. R. Vogel, July 16, 1945. Div. 14-329.141-M2
- RL-776 *An Improved K-Band Vertebrate Waveguide*, E. L. Younker, Aug. 25, 1945. Div. 14-233.412-M20
- RL-777 No report.
- RL-778 *PFI Off-Center Conversion Kit (MX 364/CPS)*, B. R. Curtis, Aug. 1, 1945. Div. 14-242.3-M12
- RL-779 *Airborne Early Warning Search Antenna*, T. J. Keary, J. R. Bohuert, Aug. 30, 1945. Div. 14-321.14-M15
- RL-780 *Effects of Clouds and Rain on K-Band Airborne Radar*, Arthur E. Bent, J. W. Miller, Aug. 1, 1945. Div. 14-122.23-M4
- RL-781 *Static Frequency-Modulation Characteristics of the Reflex Klystron*, D. R. Hamilton, Aug. 1, 1945. Div. 14-241.411-M6
- RL-782 *Mechanical Resonant Sumner*, D. B. Nicholson, R. Sher, Ems. C. Schultz, Mar. 13, 1946. Div. 14-234.322-M4
- RL-783 *GPI for Close-Control Bombing*, R. I. Hulsizer, July 27, 1945. Div. 14-329.142-M4
- RL-784 *The Double-Tuned Circuit with Transitional Coupling*, J. L. Lawson, A. M. Stone, Oct. 8, 1945. Div. 14-212.2-M2
- RL-785 *Electrical and Physical Characteristics of Some Commercial Feed-through Filters*, G. J. Wheeler, Oct. 2, 1945. Div. 14-231.6-M2
- RL-786 *A Method of Shielding for Filter Insertion Loss Measurements*, G. J. Wheeler, Aug. 8, 1945. Div. 14-231.6-M1
- RL-787 *The Measurement of Thermal Radiation at Microwave Frequencies*, R. H. Dicke, Aug. 22, 1945. Div. 14-121.2-M5
- RL-788 *Dielectric Phase Shifters for Waveguide*, F. T. Worrell, Sept. 14, 1945. Div. 14-233.412-M21

CONFIDENTIAL

- RL-789 *K-Band Antenna for High-Altitude Bombing*, A. S. Dunbar, E. B. Chisholm, Dec. 26, 1945. Div. 14-329.141-M3
- RL-790 *Moisture Proofing of Button Disc Capacitors*, J. C. Balsbaugh, W. C. Tallman of Instruments and Materials Research Laboratory, M. D. Fagen of Radiation Laboratory, July 31, 1945. Div. 14-235-M3
- RL-791 *Multiple Reflection Delay Tank*, H. Shapiro, G. D. Forbes, Aug. 11, 1945. Div. 14-263.2-M1
- RL-792 *On the Theory and Performance of Liquid Delay Lines*, A. B. Huntington, A. G. Emalle, A. E. Benfield, Aug. 31, 1945. Div. 14-211.2-M4
- RL-793 *Present Status of High Power at S-Band*, R. T. Young, Jr., Sept. 15, 1945. Div. 14-222-M1
- RL-794 *AN/APG-31*, Terry, E. A. Slusser, Aug. 25, 1945. Div. 14-323.2-M9
- RL-795 *Methods of Calculating Characteristic Values for Bilinear M Curves*, W. H. Furry, H. W. Dodson, J. R. Gill, B. E. Howard, F. D. Parker, Feb. 6, 1946. Div. 14-122.1-M3
- RL-796 *Shipboard Block Marine Antennas*, R. N. Gilbert, H. J. Riblet, Oct. 15, 1945. Div. 14-234.111-M6
- RL-797 *Tests of Aided Tracking with P1*, H. A. Kirkpatrick, J. F. Blackburn, B. P. Washburne, Sept. 25, 1945. Div. 14-244.3-M3
- RL-798 *RF Mechanical Modulator for S-Band*, R. M. Fano, Aug. 30, 1945. Div. 14-231.4-M7
- RL-799 *Graphs for Computing the Diffraction Field with Standard and Superstandard Refraction*, P. J. Rubenstein, W. T. Fishback, Aug. 13, 1945. Div. 14-213-M2
- RL-800 *Continuation of Index of Regular Reports, Special Reports, Monographs and Tests*, Nov. 12, 1945. Div. 14-510-M4
- RL-801 No report.
- RL-802 *S-Band Coaxial Line to Rectangular Waveguide Transitions*, F. L. Niemann, Dec. 7, 1945. Div. 14-233.413-M9
- RL-803 *Pulsed Quartz-Crystal Oscillator*, P. F. Brown, Aug. 21, 1945. Div. 14-251.61-M2
- RL-804 *Notes on Photometry, Colorimetry, and an Explanation of the Centibel Scale*, W. B. Nottingham, Dec. 17, 1945. Div. 14-242.23-M2
- RL-805 *Mark 56 U Chronograph*, I. Sudman, Apr. 18, 1946. Div. 14-323.32-M10
- RL-806-1 *The AEW System, Book I, Airborne Equipment*, E. Lyman, Aug. 15, 1945. Div. 14-321.14-M14
- RL-806-2 *The AEW System, Book II, Shipboard Equipment*, E. Lyman, Sept. 24, 1945. Div. 14-321.14-M16
- RL-806-3 *The AEW System, Book III, Test Equipment*, E. Lyman, Nov. 5, 1945. Div. 14-321.14-M18
- RL-807 No report.
- RL-808 *AN/APS-32 and AN/APS-34 Airborne Navigational Radar Antennas at K-Band*, T. J. Keary, A. R. Poole, J. R. Riser, H. R. Wolfe, Mar. 15, 1946. Div. 14-234.113-M3
- RL-809 *Mode Selection in Magnetrons*, R. C. Fletcher, F. F. Riske, Sept. 28, 1945. Div. 14-232.12-M5
- RL-810 *Analysis and Correction of the Impedance Mismatch Due to a Reflector*, S. Silver, Sept. 25, 1945. Div. 15-234.22-M7
- RL-811 *Parallel T Synchronizing Networks for AC Servos*, A. Sobczyk, Mar. 7, 1946. Div. 14-214.3-M14
- RL-812 *Hawkeye Antenna*, Lt. C. H. Stanley, Oct. 30, 1945. Div. 14-234.122-M8
- RL-813 *Metallic Hydride Tubes*, A. S. Eisenstein, W. C. Schumb, E. F. Sewell, F. D. Marsh, Dec. 7, 1945. Div. 14-231.221-M8
- RL-814 *A Microwave Band-Pass Filter in H₂Vegetable*, H. A. Leiter, Nov. 16, 1945. Div. 14-233.412-M24
- RL-815 *An Electronic Frequency Stabilization System for CW Microwave Oscillators*, R. V. Pound, Oct. 1, 1945. Div. 14-241.412-M2
- RL-816 *Interference Between SCR-584's Tracking APN-19 Pencans*, C. H. Dawker, Sept. 18, 1945. Div. 14-329.16-M2
- RL-817 *General Purpose Indication System*, W. F. Goodell, Jr., Jan. 18, 1946. Div. 14-242.12-M6
- RL-818 *The Generation of Harmonics by Silicon and Germanium Crystals*, Dorothy D. Montgomery, Oct. 23, 1945. Div. 14-233.111-M16
- RL-819 *A Method of Rating the Stability of Oscillators for MTI*, S. Roberts, Oct. 16, 1945. Div. 14-263-M8
- RL-820 *Range Accuracy of AN/APG-5 (ARO)*, R. M. Whitmer, Oct. 15, 1945. Div. 14-323.11-M3
- RL-821 *Characteristics of Reproduction 2K-45 Tubes*, F. S. Bailey, D. S. Beers, Oct. 29, 1945. Div. 14-241.41-M11
- RL-822 *Some Notes on Space-Charge-Limited Oscillators and Amplifiers at Micro-*

CONFIDENTIAL

	wave Frequencies, H. V. Neher, Nov. 15, 1945. Div. 14-241.3-M7		Wing of a TBM Torpedo Bomber, I. Maddaus, Jr., Dec. 6, 1945. Div. 14-234.122-M11	
RL-823	S _A 6-8 Horizontally Polarized Antenna, A. B. Dickinson, Nov. 30, 1945. Div. 14-234.111-M7	RL-843	IFF Receiving Antenna for Mounting in Cadillac Dish, I. Maddaus, Jr., Nov. 26, 1945. Div. 14-234.122-M9	
RL-824	Die-Cast Model of the CSB Antenna, A. B. Dickinson, Nov. 30, 1945. Div. 14-234.6-M7	RL-844	IFF Transmitting Antenna for Mounting in Cadillac Dish, I. Maddaus, Jr., Dec. 14, 1945. Div. 14-234.122-M12	
RL-825	Buzz-Bomb Antennas, A. B. Dickinson, Nov. 30, 1945. Div. 14-329.2-M5	RL-845	AEW Block III Relay Antenna, I. Maddaus, Jr., Nov. 30, 1945. Div. 14-234.122-M10	
RL-826	Pulsed-Interference Suppression, J. L. Lawson, Oct. 15, 1945. Div. 14-262.1-M5	RL-846	Six-Element Vertically Polarized Beacon Antennas, I. Maddaus, Jr., Dec. 8, 1945. Div. 14-328.21-M3	
RL-827	Absorption Coefficient of a Styraloy Filled Coaxial Line, H. Rowland, Mar. 4, 1946. Div. 14-233.413-M10	RL-847	Broad-Band Test Loads, R. M. Walker, Oct. 9, 1945. Div. 14-251.9-M10	
RL-828	Technical Data and Operating Notes for the 5C22 Hydrogen Thyatron, S. J. Krulikowski, Jr., Nov. 14, 1945. Div. 14-231.221-M7	RL-848	The AN/APQ-13 (60-Inch) Scanner in B-29 Airplanes, W. M. Cady, F. J. Mehlinger, W. Sichak, Oct. 29, 1945. Div. 14-234.122-M7	
RL-829	Radiation Laboratory Modulator Summary, B. Dwight, Nov. 1, 1945. Div. 14-231-M7	RL-849	Cindy Antenna, A High Resolution K-Band Radar Antenna for Sea Search, J. I. Bohnert, Nov. 1, 1945. Div. 14-234.113-M2	
RL-830	A Duplex Communication System for Microwaves, R. V. Pound, Nov. 20, 1945. Div. 14-261-M4	RL-850	Supersonic Delay Lines, H. Shapiro, Mar. 15, 1946. Div. 14-211.2-M6	
RL-831	3-Cm Vertebrae Flexible Waveguide, F. T. Worrell, Oct. 10, 1945. Div. 14-233.412-M22	RL-851	Broad-Band Biconical Vertically Polarized Dipole, H. Rowland, Feb. 6, 1946. Div. 14-328.21-M4	
RL-832	Flexible Waveguides, F. T. Worrell, Oct. 19, 1945. Div. 14-233.412-M23	RL-852	Double Skin-Back Antenna, H. Rowland, Mar. 29, 1946. Div. 14-234.6-M10	
RL-833	Noise Filtering Properties of Third Detectors, R. S. Phillips, Oct. 1, 1945. Div. 14-241.6-M2	RL-853	E _h Rotary Joints for the 3 Centimeter Band, F. E. Ehlers, Dec. 4, 1945. Div. 14-233.422-M15	
RL-834	AN/APS-30 Series Indication System, W. F. Goodell, Jr., Jan. 24, 1946. Div. 14-329.13-M3	RL-854	Conductivity Loss Measurements at K-Band, E. Maxwell, Jan. 15, 1946. Div. 14-252.3-M2	
RL-835	New Type Probe for Coaxial Standing Wave Detectors, H. Rowland, Feb. 8, 1946. Div. 14-241.6-M3	RL-855	A Tracking Error Recorder for the Ground Controlled Approach Trainer, C. M. Gilbert, C. R. Haupt, Jan. 30, 1946. Div. 411.3-M4	
RL-836	Dispersion of High-Frequency Radio Waves in Ionized Gases, H. Margenau, Oct. 26, 1945. Div. 14-122.12-M3	RL-856	Ground Course Computer for AN/APQ-T1, C. M. Gilbert, Jan. 21, 1946. Div. 14-411.1-M4	
RL-837	An Improved Frequency-Stabilization System for Microwave Oscillators, R. V. Pound, Oct. 26, 1945. Div. 14-241.412-M3	RL-857	Noamo Doppler Simulator, W. Roth, Feb. 1, 1946. Div. 14-412-M7	
RL-838	No report.	RL-858	No report.	
RL-839	The AN/APS-8 Antenna Simulator, G. W. McClure, Nov. 15, 1945. Div. 14-412-M4	RL-859	Detector Cancellation Error as a Function of Carrier Frequency, W. Selove, Oct. 31, 1945. Div. 14-124-M3	
RL-840	Variable Width Waveguide Scanners for Eagle (AN/APQ-7) and GCA (AN/MPN-1) R. McG. Robertson, Apr. 30, 1946. Div. 14-234.326-M7	RL-860	Theory of Directional Couplers, B. A. Lippman, Dec. 28, 1945. Div. 14-233.422-M16	
RL-841	A Low-Power X-Band RF Gas Switch, T. S. Ké, L. D. Smullin, Oct. 17, 1945. Div. 14-233.424-M2	RL-861	APS-33 Antenna, Final Preproduction Data, L. G. Jones, Jan. 11, 1946. Div. 14-234.122-M14	
RL-842	IFF Antenna for Mounting on the			

CONFIDENTIAL

- RL-862 *A New Pillbox Feed*, M. A. Taggart, Nov. 7, 1945. Div. 14-234.233-M1
- RL-863 *Horn with Metal Lens*, M. A. Taggart, Nov. 13, 1945. Div. 14-234.21-M11
- RL-864 *The RL-270 Series of Precision Patentimeters*, R. J. Sullivan, Mar. 25, 1946. Div. 14-211.3-M11
- RL-865 *Summary of the Life Test Program on 3C45, 4C35, and 5C22 Hydrogen Thyatrons*, S. J. Krulikovski, Jr., Jan. 31, 1946. Div. 14-231.221-M9
- RL-866 *Airborne Ring-Maria Antenna*, E. N. Gilbert, Jan. 16, 1946. Div. 14-234.111-M9
- RL-867 *Analysis of a Half-Wave Rectifier Circuit Involving Inductance, Resistance, and Capacitance*, F. E. Bothwell, P. D. Crout, Dec. 26, 1945. Div. 14-212.1-M3
- RL-868 *Design Considerations for an Improved Interception (AI) Radar, The AN/APS-21 System*, R. McG. Robertson, Dec. 15, 1945. Div. 14-323.2-M11
- RL-869 *Lens Feed for K-Band Pillboxes*, L. J. Eyges, Jan. 23, 1946. Div. 14-234.233-M3
- RL-870 *X-Band Sea-Return Measurements*, E. W. Cowan, Jan. 16, 1946. Div. 14-122.112-M3
- RL-871 *Steamlined Microwave Omnidirectional Antennas*, C. B. Barker, H. J. Riblet, Jan. 8, 1946. Div. 14-234.111-M4
- RL-872 *Measurements on Noise from Reflex Oscillators*, J. B. H. Kuper, M. C. Waltz, Dec. 21, 1945. Div. 14-241.413-M6
- RL-873 *Theory of Noise from the Reflex Oscillator*, J. K. Knipp, Jan. 16, 1946. Div. 14-211.413-M7
- RL-874 *A Final Report on AN/APS-10*, R. L. Sinsheimer, Mar. 1, 1946. Div. 14-321.1-M3
- RL-875 *Range and Tracking Accuracy of AN/APG-15B*, C. T. Bumer, Mar. 22, 1946. Div. 14-323.12-M9
- RL-876 *A Navigational Radar for Naval Auxiliaries and Merchant Marine*, R. M. Emberson, R. E. Meagher, Oct. 23, 1945. Div. 14-327-M5
- RL-877 *Slip-Ring Assembly for Mk 56 Director*, E. J. Scott, Mar. 26, 1946. Div. 14-323.32-M9
- RL-878 *The AN/APS-23 Antenna and Installation*, W. M. Cady, Jan. 16, 1946. Div. 14-231.122-M13
- RL-879 *XCT Final Report*, W. V. Smith, M. A. Herlin, H. G. Weightman, Mar. 6, 1946. Div. 14-232.19-M17
- RL-880 *Three-Electrode Triggered Gap*, K. J. Germeshausen, H. R. Zeller, Nov. 19, 1945. Div. 14-231.21-M10
- RL-881 *Pulse-Transformer Committee, Proposed Basic Specifications for Pulse Transformers*, P. R. Gillette, Nov. 8, 1945. Div. 14-211.41-M15
- RL-882 *Radiation Laboratory Pulse-Transformer Designs*, P. R. Gillette, Nov. 1, 1945. Div. 14-211.41-M14
- RL-883 *Pulse-Forming Network Committee, Proposed Basic Specifications for Pulse-Forming Networks*, P. R. Gillette, Nov. 2, 1945. Div. 14-212.4-M4
- RL-884 *Analysis of the Tracking Errors of the Mk 56N System*, R. S. Phillips, C. D. Doyd, Mar. 1, 1946. Div. 14-244.1-M3
- RL-885 *Rut-Roc Duplexing*, J. Reed, Feb. 4, 1946. Div. 14-233.3-M1
- RL-886 *AN/APS-31/33 R-F Unit*, H. K. Farr, Mar. 14, 1946. Div. 14-233.2-M6
- RL-887 *Automatic Frequency Control for AN/APS-31/33*, R. Durand, Jan. 17, 1946. Div. 14-232.15-M3
- RL-888 *AN/APQ-34 R-F Head*, A. E. Whitford, E. Durand, Dec. 31, 1945. Div. 14-233.2-M4
- RL-889 *AN/TPS-10B R-F Head Termination Report*, E. Durand, Mar. 15, 1946. Div. 14-322.1-M11
- RL-890 *Video Mapping*, J. Hexem, Jan. 29, 1946. Div. 14-242.24-M5
- RL-891 *Description and Operation of the General-Purpose Variable Delay Unit*, R. P. Abbenhouse, Mar. 26, 1946. Div. 14-211.2-M7
- RL-892 *High-Voltage Oxide Coated Vacuum Rectifiers*, K. J. Germeshausen, K. J. Urquhart, Dec. 19, 1945. Div. 14-232.141-M7
- RL-893 *Discontinuities in Standing Wave Detectors and Waveguide Junction Steps*, I. G. Mansur, Dec. 14, 1945. Div. 14-233.423-M11
- RL-894 No report.
- RL-895 *Recovery Time Measurements in Band-Pass TR's for Various Gases*, F. L. McMillan, Jr., I. H. Dearnley, C. H. Pearsall, Dec. 18, 1945. Div. 14-233.31-M12
- RL-896 *A Four-Horn Feed to Give Cos² Antenna Patterns*, W. J. West, Mar. 15, 1946. Div. 14-234.21-M13
- RL-897 *An IFF Mack 5/UNF Feed in the SCI Search Antenna*, W. J. West, Mar. 26, 1946. Div. 14-234.21-M14
- RL-898 *An IFF Mack 5/UNF Feed in the AN/CPS-6 Vertical Antenna*, W. J. West, Apr. 10, 1946. Div. 14-234.21-M15

CONFIDENTIAL

RL-899	<i>An IFF Mark 5/UNH Radiator in the AEF Antenna</i> , W. J. West, Mar. 20, 1946. Div. 14-221.14-M19	RL-920	No report.
RL-900	<i>Mechanical Computer Mechanism for Moving COHO</i> , A. D. Hoffman, Dec. 14, 1945. Div. 14-213-M5	RL-921	<i>Results of Tests Performed on Synchro Units and Systems</i> , C. E. Foster, R. R. Perkins, M. M. Hubbard, Apr. 8, 1946. Div. 14-214.4-M5
RL-901	<i>A Broad-Band TEM Filter</i> , W. O. Smith, Jan. 11, 1946. Div. 14-234.233-M2	RL-922	<i>Description and Method of Operation of the Special Synchro Test Bench and Synchro Testing Procedures</i> , C. E. Foster, Mar. 26, 1946. Div. 14-214.4-M3
RL-902	<i>A Grid-Type RF Attenuator</i> , W. O. Smith, Apr. 4, 1946. Div. 14-251.1-M31	RL-923	No report.
RL-903	<i>A Flat Plate Beam-Shaping Antenna</i> , W. O. Smith, Jan. 15, 1946. Div. 14-234.22-M8	RL-924	<i>Calculation of the Resonant Frequency of a Torus by Lagrangian and Variational Methods</i> , N. H. Painter, Nov. 14, 1945. Div. 14-112-M7
RL-904	No report.	RL-925	No report.
RL-905	<i>Improved RF System for the Transmitter-Receiver Unit of the APQ-13</i> , R. L. Best, H. K. Farr, Apr. 15, 1946. Div. 14-328.2-M3	RL-926	<i>The Radar Chart Projector</i> , D. B. McLaughlin, C. A. Smith, Apr. 18, 1946. Div. 14-212.4-M3
RL-906	<i>The Application of Powdered Iron Materials as Permeable Dielectrics at Microwave Frequencies</i> , M. R. Hall, M. Harwood, Mar. 26, 1946. Div. 14-131.15-M1	RL-927	<i>Ground-Clutter Unit for the Ground-Controlled Approach Trainer</i> , C. M. Gilbert, Feb. 20, 1946. Div. 14-411.3-M5
RL-907	<i>Trainer for Mark 35 Radar</i> , H. O. Macey, Apr. 5, 1946. Div. 14-411.5-M9	RL-928	<i>The SP Feed-In Trainer</i> , S. B. Cohen, Apr. 10, 1946. Div. 14-411.5-M10
RL-908	<i>AN/APG-5 (ARO) as a Terrain Clearance Indicator</i> , R. M. Walker, Jan. 16, 1946. Div. 14-323.11-M5	RL-929	<i>Theoretical Interpretation of Recovery Times of TR Hoses</i> , H. Margenau, Jan. 9, 1946. Div. 14-233.312-M9
RL-909	<i>AN/APG-13B Vulture Rocket Computer</i> , T. E. Lawrence, Jan. 23, 1946. Div. 14-323.6-M8	RL-930	<i>The Interaction of Discontinuities on a Transmission Line</i> , P. M. Marcus, Feb. 6, 1946. Div. 14-233.423-M12
RL-910	<i>Off-Frequency C-W Jamming</i> , C. M. Allied, A. L. Gardner, Mar. 22, 1946. Div. 14-262.1-M7	RL-931	No report.
RL-911	<i>S-Band Tumble Systems</i> , J. E. Cook, J. E. Richardson, Mar. 21, 1946. Div. 14-262.1-M6	RL-932	<i>Supermarine Solid Delay Lines</i> , D. L. Arenberg, Apr. 30, 1946. Div. 14-267-M15
RL-912	<i>Short-Pulse Techniques for High-Definition Radar Systems</i> , V. Josephson, Mar. 13, 1946. Div. 14-124.1-M3	RL-933	<i>Alkaline Earth Oxide Cathodes for Pulsed Tubes</i> , A. S. Elsenstein, E. A. Coombs, J. G. Ruck, A. Fineman, Mar. 30, 1946. Div. 14-232.141-M8
RL-913	<i>Cosine Reflector Modulation of Airplane Signals</i> , R. M. Ashby, F. W. Martin, Apr. 8, 1945. Div. 14-267-M8	RL-934	<i>Three-Tone PPI</i> , F. N. Barry, Mar. 20, 1946. Div. 14-242.3-M13
RL-914	<i>Modulation of Radar Signals from Airplanes</i> , R. M. Ashby, F. W. Martin, J. L. Lawson, Mar. 28, 1946. Div. 14-262.5-M3	RL-935	<i>Notes on the Contamination of Mercury by Stainless Steel</i> , H. R. Huntington, Mar. 1, 1946. Div. 14-223-M3
RL-915	No report.	RL-936	No report.
RL-916	<i>A Broad-Band Balanced Mixer for S-Band</i> , W. D. Hope, Jan. 23, 1946. Div. 14-233.12-M11	RL-937	<i>SN-41/APA-53 (Cadillac II Synchro-nizer) and IN-188/APA-53 (Cadillac II Indicator)</i> , P. Jarmolcz, Apr. 18, 1946. Div. 14-242.12-M9
RL-917	<i>Pulse-Length Selector and Multiple-Pulse Decoder</i> , R. M. Askey, L. K. Neher, Mar. 21, 1946. Div. 14-124.1-M4	RL-938	No report.
RL-918	No report.	RL-939	<i>A Photographic Method for Assessment of Bombing Results</i> , G. F. Wheeler, Feb. 28, 1946. Div. 14-329.151-M2
RL-919	No report.	RL-940	<i>Sine Potentiometer Tester</i> , C. A. Washburn, Mar. 21, 1946. Div. 14-211.3-M10
		RL-941	<i>The Use of Synchros for Radial Time Base Displays</i> , W. O. Reed, Mar. 25, 1946. Div. 14-214.4-M4
		RL-942	<i>Effect of the Tuning Plunger on</i>

CONFIDENTIAL

	Operation of 2K33 Type Tubes, G. H. Vineyard, Jan. 16, 1946. Div. 14-241.411-M9	RL-943		Wide-Range Tunable Stabilizer, M. A. Herlin, Feb. 21, 1946. Div. 14-232.10-M11	RL-964
	Electron Optical Studies of the 2K33 Tube, G. H. Vineyard, Jan. 17, 1946. Div. 14-241.413-M8	RL-944		A Method of Compensating the Frequency Dependence of Attenuation in a Supersonic Delay Line, R. D. Arnold, Dec. 27, 1945. Div. 14-211.2-M5	RL-905
	No report.	RL-945		Measurement of Phase in Microwave Antenna Fields by Phase-Modulation Method, H. R. Worthington, Mar. 14, 1946. Div. 14-234.4-M10	RL-960
	No report.	RL-946		Theory of Alternating Current Discharges in Gases, H. Margenau, Jan. 10, 1946. Div. 14-113-M6	RL-967
	No report.	RL-947		T-5 Field Chronograph for SCR 584, I. H. Sudman, Mar. 18, 1946. Div. 14-323.31-M4	RL-968
	No report.	RL-948		Dielectric Rod Endfire Antennas Close to Metal Surfaces, J. E. Eaton, Jan. 23, 1946. Div. 14-234.51-M2	RL-969
	Propagation in an Atmosphere Containing a Discontinuity in the Index of Refraction, B. E. Howard, Mar. 28, 1946. Div. 14-122.12-M4	RL-949		X-Band Bandpass TR Tube, W. C. Caldwell, Jan. 22, 1946. Div. 14-233.31-M13	RL-970
	The Angular Alignment of Radar Antennas, E. M. Bailey, Mar. 29, 1946. Div. 14-234.6-M11	RL-950		S-Band Bandpass TR Tubes, L. D. Smullin, Jan. 23, 1946. Div. 14-233.31-M14	RL-971
	AN/CPS-6 (V-Beau) Antenna, C. G. Stergiopoulos, Feb. 12, 1946. Div. 14-234.123-M3	RL-951		X-Band Beacon Reference Cavities, L. D. Smullin, Jan. 15, 1946. Div. 14-211.5-M0	RL-972
	No report.	RL-952		Linear Array for Use in the AN/APS-23 Antenna, J. R. Rissler, A. M. Steenland, J. Steinberger, L. Eyges, Mar. 19, 1946. Div. 14-234.122-M17	RL-973
	Hydogen Thyatrons in Pulse Generator Circuits, S. J. Krulikoski, Jr. Mar. 18, 1946. Div. 14-231.221-M10	RL-953		K-Band Echo Line, J. M. Wolf, Mar. 26, 1946. Div. 14-233.412-M27	RL-974
	SR-846B S-Band Oscillator, J. C. Reed, Feb. 26, 1946. Div. 14-232.21-M1	RL-954		A Moving COHO Conversion Unit, V. A. Olson, Apr. 3, 1946. Div. 14-263-M13	RL-975
	Automatic Frequency Control of Thermally Tuned Beacon Local Oscillator, M. W. P. Strandberg, Mar. 6, 1946. Div. 14-241.41-M14	RL-955		Reflections from Curved Surfaces, C. B. Barker, H. Riblet, Feb. 1, 1940. Div. 14-122.111-M4	RL-976
	Distortion in X-Band Detectors, M. W. P. Strandberg, Dec. 27, 1945. Div. 14-233.12-M10	RL-956		An X-Band Frequency-Modulated Relay System for Video Frequencies, L. M. Hollingsworth, H. Logemann, Jr., A. W. Lawson, Jr., J. M. Sturtevant, Jan. 3, 1946. Div. 14-267-M7	RL-977
	Video Discriminator Automatic Frequency Control, M. W. P. Strandberg, Mar. 15, 1946. Div. 14-241.41-M15	RL-957		A Synchronization System for Ground Radar Relay, J. M. Sturtevant, E. W. Samson, Jan. 3, 1946. Div. 14-266-M3	RL-978
	Performance of Microwave Harmonic Mixers, D. L. Falkoff, Mar. 11, 1946. Div. 14-233.12-M12	RL-958		Note on a Low-Power S-Band Gas Switch, T. S. Kê, Dec. 10, 1945. Div. 14-233.424-M3	RL-979
	A Method for Automatic Frequency Control of Thermally Tuned Oscillators, G. H. Nibbe, Dec. 20, 1945. Div. 14-241.41-M13	RL-959		Two Circularly Polarized S-Band Horns, D. F. Sherman, Jan. 15, 1946. Div. 14-234.111-M8	RL-980
	K-Band Rapid Scan, C. J. Swartwout, Mar. 15, 1946. Div. 14-234.322-M5	RL-960		An X-Band Hemi-Isotropic Radiator, D. F. Sherman, Jan. 10, 1946. Div. 14-234.112-M5	RL-981
	Compact Horns Intermediate Between Polyhedral and Reflectors, R. E. Dillon, L. J. Eyges, Jan. 31, 1946. Div. 14-234.6-M8	RL-961			
	The MK VII Supersonic Trainer, W. K. Hodder, Feb. 28, 1946. Div. 14-421-M1	RL-962			
	An Application of the Pulse Technique to the Measurement of the Absorption of Supersonic Waves in Liquids, M. Cefola, M. E. Droz, S. Frankel, E. M. Jones, G. Maslach, C. E. Teeter, Jr., Mar. 30, 1946. Div. 14-423-M3	RL-963			

CONFIDENTIAL

RL-982	No report.		<i>teuna Assembly</i> , C. F. Chubb, Jr., Apr. 23, 1946. Div. 14-234.122-M18
RL-983	No report.	RL-1010	<i>Notes on MTI Receivers</i> , W. Selove, Mar. 25, 1946. Div. 14-263-M11
RL-984	No report.		<i>Development of Microwave Test Sets</i> , A. Fong, Apr. 18, 1946. Div. 14-121.2-M8
RL-985	No report.	RL-1011	No report.
RL-986	No report.		No report.
RL-987	No report.	RL-1012	<i>Dipole Arrays Backed by Reflecting Sheets</i> , D. F. Sherman, Mar. 14, 1946. Div. 14-234.22-M12
RL-988	No report.	RL-1013	<i>A Displacement or Velocity Servo Amplifier</i> , W. Roth, Feb. 25, 1946. Div. 14-214.3-M13
RL-989	No report.	RL-1014	<i>Dynamic-Range Compression for MTI</i> , W. Selove, Mar. 15, 1946. Div. 14-263-M10
RL-990	<i>Automatic Plotter KC-308 Used with SCR-584 for Mortar Location</i> , L. J. Sullivan, Apr. 3, 1946. Div. 14-265.4-M1	RL-1015	<i>An Automatic Noise-Figure Meter</i> , W. Selove, Mar. 26, 1946. Div. 14-125.1-M2
RL-001	No report.		<i>An Experimental S-Band Airborne MTI System</i> , H. G. Voorhies, Jr., Mar. 29, 1946. Div. 14-263-M12
RL-002	No report.	RL-1016	<i>One Knob Tunable X-Band RF Head</i> , M. W. P. Strandberg, Jan. 23, 1946. Div. 14-233.2-M5
RL-003	<i>A Theory of Resonance in Rotary Joints of the TM_n Type</i> , H. K. Farr, Jan. 15, 1946. Div. 14-233.422-M18	RL-1017	<i>An Automatic Frequency-Control System for Magnetrons with Beacon Applications</i> , L. M. Hollingsworth, R. Dickinson, Mar. 9, 1946. Div. 14-232.15-M5
RL-994	<i>Firefly Moving-Vehicle Detector, AN/APS-27</i> , H. L. Schultz, E. M. Lyman, Feb. 18, 1946. Div. 14-321.13-M1	RL-1018	<i>Butterfly Mating Vehicle Detector AN/APS-26</i> , C. R. Ahern, Feb. 15, 1946. Div. 14-263.1-M5
RL-995	<i>Capacitive Type RF Attenuators</i> , W. O. Smith, Jan. 18, 1946. Div. 14-251.1-M30	RL-1019	No report.
RL-996	<i>Omnidirectional Antennas for BUPX</i> , L. J. Eyges, Jan. 17, 1946. Div. 14-234.112-M6	RL-1020	<i>Microwave Test Signals</i> , S. Katz, Jan. 15, 1946. Div. 14-121.2-M7
RL-997	<i>Modulator for AN/TPS-10 Radar</i> , P. C. Bettler, Jan. 31, 1946. Div. 14-231.21-M14	RL-1021	<i>A Theoretical and Experimental Study of Radar Ground Return</i> , R. E. Clapp, Apr. 10, 1946. Div. 14-264.1-M6
RL-998	<i>Interference Measurements on the AN/APS-30 Series</i> , R. G. Fluharty, Feb. 20, 1946. Div. 14-253.1-M5	RL-1022	<i>SCI Search Antenna Mark I</i> , M. L. Kales, Mar. 13, 1946. Div. 14-234.111-M11
RL-999	No report.	RL-1023	<i>SCI Search Antenna Mark II</i> , M. L. Kales, Feb. 20, 1946. Div. 14-234.111-M10
RL-1000	<i>AN/APS-30 Modulator Status</i> , A. C. Donovan, Jan. 17, 1946. Div. 14-231.2-M6	RL-1024	<i>The Beavertail (AN/CPS-4) Antenna</i> , C. S. Pao, Apr. 9, 1946. Div. 14-234.123-M4
RL-1001	<i>"Wintercope" or Fast Sweep Synchroscope</i> , D. F. Winter, Apr. 12, 1946. Div. 14-251.72-M8	RL-1025	<i>Theory and Design of Guided Missiles Control System</i> , AN/APW-3, L. L. Davenport, W. B. Sheriff, Apr. 8, 1946. Div. 14-329.2-M6
RL-1002	<i>The Absorption of Atmospheric Water-Vapor in the K-Band Region</i> , R. H. Dicke, R. L. Kyhl, A. B. Vane, E. R. Beringer, Jan. 15, 1946. Div. 14-122.13-M5	RL-1026	<i>Reflection of Radiation from Curved Surfaces</i> , P. M. Marcus, Jan. 16, 1946. Div. 14-122.111-M3
RL-1003	No report.	RL-1027	<i>Grounded Grid IF Amplifiers</i> , A. B. Macnee, Jan. 18, 1946. Div. 14-241.32-M7
RL-1004	No report.		
RL-1005	<i>LCT, 900 Mc/sec FM-CW Magnetron</i> , A. L. Vitter, Jr., P. W. Forsbergh, Jr., G. C. Dewey, Feb. 28, 1946. Div. 14-232.19-M16	RL-1028	
RL-1006	<i>The 4J70-77 Series of Tunable Magnetrons</i> , A. G. Smith, Feb. 4, 1946. Div. 14-232.10-M10	RL-1029	
RL-1007	<i>Final Report on the BM50 Magnetron</i> , F. Hutchinson, N. P. Nichols, M. A. Herlin, J. R. Feldmeier, Mar. 29, 1946. Div. 14-232.112-M6	RL-1030	
RL-1008	No report.		
RL-1009	<i>Boreighting the AN/APG-15 An-</i>		

CONFIDENTIAL

- RL-1031 No report.
RL-1032 *Intermediate - Frequency Amplifier Overload Characteristics*, S. A. Smith and F. M. Ashbrook, Jan. 31, 1946. Div. 14-241.32-M8
- RL-1033 No report.
RL-1034 *Combined Reflector-Cavity Automatic Frequency Control for Thermally Tuned Reflex Oscillator Tubes*, G. H. Nibbs, Dec. 11, 1945. Div. 14-241.41-M12
- RL-1035 *Synthetic Radar Echoes in the Presence of FM Jamming*, A. M. Stone, Apr. 9, 1946. Div. 14-262.1-M8
- RL-1036 *A Trigger Generator for Signal Threshold Studies*, R. R. Meijer, Apr. 2, 1946. Div. 14-251.8-M17
- RL-1037 *Waveguide Motional Joints*, Walter Aron, Jan. 18, 1946. Div. 14-233.422-M19
- RL-1038 *A Discussion of Plotting Devices for PPFs*, R. W. Blue, Apr. 3, 1946. Div. 14-265-M2
- RL-1039 *A Method for Calculating Magnetron Resonant Frequencies and Modes*, F. E. Bothwell, P. D. Crout, Feb. 8, 1946. Div. 14-232.12-M6
- RL-1040 *Echo-Rise Application*, J. M. Wolf, Apr. 18, 1946. Div. 14-251.3-M11
- RL-1041 No report.
RL-1042 *Electronic Line-Voltage Stabilizers*, J. M. McBean, Feb. 7, 1946. Div. 14-235.2-M3
- RL-1043 No report.
RL-1044 *SG-1 Mark III Antenna*, S. J. Mason, Apr. 5, 1946. Div. 14-234.121-M6
- RL-1045 *The Antenna for Radar Mark 35*, L. E. Swartz, Jan. 29, 1946. Div. 14-234.112-M7
- RL-1046 *An Extension of Lagrange's Equations to Electromagnetic Field Problems, Equivalent Networks, Part II*, P. D. Crout, Jan. 15, 1946. Div. 14-111-M12
- RL-1047 *The Determination of Fields Satisfying Laplace's, Poisson's, and Associated Equations by Flux Plotting*, P. D. Crout, Jan. 23, 1946. Div. 14-265.2-M2
- RL-1048 *A Flux Plotting Method for Obtaining Fields Satisfying Maxwell's Equations, with Applications to the Magnetron*, P. D. Crout, Jan. 16, 1946. Div. 14-265.2-M1
- RL-1049 *A Theoretical Treatment of Radar Target Return, Part II*, Prescott D. Crout, Dec. 20, 1945. Div. 14-122.113-M9
- RL-1050 *Supersonic Components for Use in Radar Trainers*, S. Frankel, P. Rosenberg, Mar. 25, 1946. Div. 14-422.1-M6
- RL-1051 *RF Phasing of Pulsed Magnetrons*, J. E. Evans, R. C. Fletcher, F. F. Rieke, Feb. 6, 1946. Div. 14-232.19-M15
- RL-1052 No report.
RL-1053 No report.
RL-1054 *Final Report on BUPX*, H. H. Bailey, Apr. 8, 1946. Div. 14-328.111-M8
- RL-1055 *A Supersonic Echo Simulating System for AN/APQ-T1*, S. Frankel, D. C. Crahame, Mar. 25, 1946. Div. 14-411.1-M5
- RL-1056 No report.
RL-1057 *Special GCA Trainer Circuits*, C. M. Gilbert, Mar. 15, 1946. Div. 14-411.3-M6
- RL-1058 *The OCJ-1 Trainer*, C. W. McClure, Mar. 25, 1946. Div. 14-411.5-M8
- RL-1059 *A Dummy Log Transmitter for the OBJ Radar Trainer*, R. U. Nathe, Feb. 25, 1946. Div. 14-411.5-M7
- RL-1060 No report.
RL-1061 No report.
RL-1062 *Design Proposal for AN/APN-19A Check Set*, R. S. Chaloff, R. J. Harrison, W. W. Mathison, G. B. Guthrie, Mar. 27, 1946. Div. 14-251.9-M11
- RL-1063 *The Effect of Small Changes in Circuit Parameters on the Solution of Network Problems*, F. E. Bothwell, Jan. 14, 1946. Div. 14-212.8-M9
- RL-1064 *Mortar Fire Detection*, H. R. Worthington, Jr., Apr. 10, 1946. Div. 14-234.326-M5
- RL-1065 *K-Band Antiaircraft Fire Control*, H. R. Worthington, Feb. 21, 1946. Div. 14-323.3-M1
- RL-1066 No report.
RL-1067 No report.
RL-1068 *AN/APS-31 Antenna*, M. Berman, Feb. 26, 1946. Div. 14-234.122-M16
- RL-1069 *Rum Shaping*, J. Certalno, Apr. 10, 1946. Div. 14-234.6-M12
- RL-1070 *Metal Plate Lens for Casp Antenna*, A. S. Dunbar, Feb. 15, 1946. Div. 14-234.22-M10
- RL-1071 *Summary of High-Power Breakdown Tests on Microwave Components*, H. F. Clarke, G. L. Ragan, R. M. Walker, I. Mansur, Jan. 10, 1946. Div. 14-222-M2
- RL-1072 *The Catilloc Trainer*, E. M. Jones, Apr. 16, 1946. Div. 14-411.5-M11
- RL-1073 *Low Altitude Casp Antenna for APS-33 Project*, J. H. Gardner, Feb. 21, 1946. Div. 14-234.122-M15
- RL-1074 *Survey of Foster Scanner Developments*, W. E. Millett, H. R. Worthington, E. L. Younker, C. G. Montgomery, D. D. Montgomery, Apr. 25, 1946. Div. 14-234.326-M6

CONFIDENTIAL

RL-1075	No report.	RL-M-110	Memorandum Describing High Gain D-C Amplifier, W. B. Nottingham, June 3, 1942. Div. 14-241.3-M1
RL-1076	No report.		
RL-1077	No report.		
RL-1078	The Alteration in the Radiated Field of a Paraboloid Due to a Shift in the Position of the Dipole Feed, F. B. Hildebrand, Feb. 26, 1946. Div. 14-234.22-M11	RL-M-111	Instruction Manual for Experimental Service Modulator Model 4, Type 1372, July 30, 1942. Div. 14-231.3-M1
		RL-M-112	Manual of Operation for Model No. 2 Synchroscope, July 13, 1942. Div. 14-251.72-M1
RL-1079	No report.		
RL-1080	Moving Target Indication on MKW, A. G. Emslie, Feb. 19, 1946. Div. 14-263-M9	RL-M-113	Handbook for Radar Equipment 506 RL, July 25, 1942. Div. 14-321.12-M1
		RL-M-114	3-Cm Magnetron Test Bench Construction and Operation, J. B. Wiesner, Aug. 22, 1942. Div. 14-232.112-M2
RL-1081	Project TGI (AN/APX-11, AN/APX-16), J. Lien, Apr. 18, 1946. Div. 14-324-M2	RL-M-115	Spectrum Analyzer, Type 103, for Pulsed Oscillator at 3000 Mc/sec, Nov. 18, 1942. Div. 14-251.5-M1
RL-1082	Admittance Characteristics of Some S-Band Waveguide Fed Dipoles, J. Whelpton, Jan. 24, 1946. Div. 14-233.412-M26	RL-M-110	Manual for Magnetrons, Types 2J 22-34, 500AY-GY, 714AY and 718AY-EY, K. R. More, Sept. 1, 1943. Div. 14-232.1-M4
RL-1083	Continuation of Index of Regular Reports, Special Reports, Manuals, and Texts, Mar. 7, 1946. Div. 14-510-M6	RL-M-117	Instruction Manual for Pulsed Oscillator, 3000 Mc/sec Model No. 1, Feb. 8, 1943. Div. 14-251.6-M3
	Manuals	RL-M-118	Instruction Manual Model P4 Synchroscope, Mar. 2, 1943. Div. 14-251.72-M2
RL-M-99	Preliminary Operation Manual, Special Radio Equipment for ASVR-18. Div. 14-310.211-M12	RL-M-119	No report.
RL-M-100	Instruction Manual for B-18B ASV Radar Installation, S. McGrath, Apr. 1, 1942. Div. 14-310.211-M5	RL-M-120	Tentative Instruction Manual for MIT Radiation Laboratory Test Set (Type A), F. J. Gaffney, Mar. 25, 1943. Div. 14-251.9-M5
RL-M-101	Instruction Manual for Raytheon Service Modulator WX 4002 B (Included in RL-M-100), Mar. 14, 1942. Div. 14-310.211-M5	RL-M-121	Preliminary Handbook (Same as RL-M-161) for Experimental Prototype Model Radio Set SCR-620 and Supplement (dated July 1, 1943), March, 1943. Div. 14-328.112-M2
RL-M-102	Instruction Manual for B-18 Indicator Components (Included in RL-M-100), Mar. 26, 1942. Div. 14-310.211-M5	RL-M-122	Instruction Manual for Audio Indicator Type 123R, S. Newell, Mar. 26, 1943. Div. 14-242.11-M1
RL-M-103	Instruction Manual for Raytheon Laboratory Modulators WX 4054, WX 4054 A and WX 4054 B, S. McGrath, Apr. 7, 1942. Div. 14-2314-M4	RL-M-123	Tentative Operating Instructions for MIT Radiation Laboratory Modified Type 102-A Test Set (Type 102A-1), May 10, 1943. Div. 14-251.9-M6
RL-M-104	Instruction Manual for B-18 RF Components (Included in RL-M-100), Apr. 5, 1942. Div. 14-310.211-M5	RL-M-124	Model P4E Synchroscope and RF Envelope Indicator, June 18, 1943. Div. 14-251.72-M3
RL-M-105	Instruction Manual for B-18 Receiver (Included in RL-M-100), Apr. 3, 1942. Div. 14-310.211-M5	RL-M-125	ARO System, General Description and Operational Procedure, Sept. 1, 1943. Div. 14-310.212-M1
RL-M-106	No report.		
RL-M-107	Operating Instructions for the Model B PPI Indicator Central, C. W. Sherwin, Apr. 9, 1942. Div. 14-242.3-M2	RL-M-126	Instruction Manual for Revised Model P4 Synchroscope, June 14, 1943. Div. 14-251.72-M5
RL-M-108	Operating Instructions for the Model 417 Klystron for Use as a Local Oscillator in Radar Receivers, R. C. Rierdan, A. G. Hill, May 6, 1942. Div. 14-241.411-M2	RL-M-127	Instruction Manual for Spectrum Analyzer (Type 105) for X-Band Pulsed Oscillators, and Spectrum Analyzer (Type 107) for S-Band Pulsed Oscillators, July 14, 1943. Div. 14-251.5-M2
RL-M-109	Instructions for Type E Self-Synchronous Oscilloscope, F. J. Gaffney, June 1, 1942. Div. 14-251.71-M1	RL-M-128	Tentative Operating Instructions for MIT Radiation Laboratory Echo Box,

CONFIDENTIAL

- Dwg 3456, June 24, 1943.
 Div. 14-251.3-M2
 RL-M-129 *Handbook for Model CXEH, BGX, Radar Beacon, August 1943.*
 Div. 14-328.111-M1
 RL-M-129B *Handbook for Model CXEH Radar Beacon and Associated Test Equipment, J. R. Dorney, February 1944.*
 Div. 14-328.111-M2
 RL-M-130 *Preliminary Manual for Radar Beacon Type RPS (Prototype of AN/CPN-3, similar in function and components to SCR-620), L. H. Orpin, Editor, Jan. 3, 1944.*
 Div. 14-328.112-M4
 RL-M-131 *Instruction Manual for Service Modulator Model 9, K. J. Urquhart, Sept. 1, 1943.*
 Div. 14-231.3-M2
 RL-M-132 *Radio Set SCR-584, Preliminary Technical Instruction Book, September 1943.*
 Div. 14-323.4-M3
 RL-M-133 *Handbook of Maintenance Instructions for Type TTX-III, Test Set (Type B), F. B. Wood, Editor, January 1944.*
 Div. 14-251.6-M5
 RL-M-134 *Manual for Operation and Maintenance of TB Audio Indicator, Sept. 1, 1943.*
 Div. 14-242.11-M2
 RL-M-135 *AN/APS-15 Schematics [Sept. 13, 1943].*
 Div. 14-329.12-M1
 RL-M-135B *AN/APS-15 Schematics.*
 RL-M-135C *Handbook of Instructions for Radio Set AN/APS-15, (H-X), September 1943.*
 Div. 14-329.1-M1
 RL-M-136 *Technical Manual for Radio Set SCR-584, Mk III, May 1944.*
 Div. 14-321.3-M1
 RL-M-137 *Instruction Manual for Projection PPI, H. O. Murey, J. T. Soller, M. A. Starr, Jan. 10, 1944.*
 Div. 14-242.3-M8
 RL-M-138 *Manual for Fighter Tail-Warning Equipment, Sept. 1, 1943.*
 Div. 14-321.11-M1
 RL-M-139 *Instruction Manual for Model 6-B (MEW) Modulator, P. C. Bettler, Nov. 29, 1943.*
 Div. 14-231.3-M3
 RL-M-140 *Types TON-11A (Type Q) and TON-11B, Oneilloneques, F. B. Wood, Editor, Apr. 24, 1944.*
 Div. 14-251.71-M4
 RL-M-141 *Instructions for TGS-28B, TGS-3BL and TGS-5BL Signal Generators, E. A. S. Jacobson, Nov. 11, 1945.*
 Div. 14-251.6-M14
 RL-M-142 *Instructions for Type TSK-15K Spectrum Analyzer, F. B. Wood, S. Katz, I. Shapiro, July 3, 1945.*
 Div. 14-251.5-M7
 RL-M-143A *Instructions for TGN-2BL and TGN-3BL Signal Generators, F. B. Wood, E. A. S. Jacobson, Dec. 21, 1944.*
 Div. 14-251.6-M9
 RL-M-144 *Glossary of Terms Used in Connection with Radiation Laboratory Radar, H. Shapiro, Nov. 15, 1943.*
 Div. 14-530-M1
 RL-M-145 *Instruction Manual for Model 7A Hydrogen Thyatron Modulator, H. J. Hall, Feb. 1, 1944.*
 Div. 14-231.221-M2
 RL-M-146 *Echo-Hox Techniques for Testing S-Band Skip-Horne Radars, S. F. Johnson, L. B. Young, Nov. 24, 1943.*
 Div. 14-251.3-M3
 RL-M-147 *Synchroscope Handbook (Model SYN-15), M. J. Cohen, Editor, December, 1943.*
 Div. 14-251.72-M4
 RL-M-148A *Handbook of Instructions for AN/APA-9 (Aspen) Radar Set, Nov. 29, 1943.*
 RL-M-148B *Handbook of Instructions for AN/APA-9 (Aspen) Radar Set (Second Abbreviated Edition), Dec. 21, 1943.*
 Div. 14-329.132-M4
 RL-M-148C *Handbook of Instructions for Radio Set AN/APA-9, Preproduction Sets, (Complete Edition), A. E. Caswell, February 1944.*
 Div. 14-329.132-M6
 RL-M-149 *Instruction Manual for Installation of Radiation Laboratory Type B Plugs on Cables, R. R. Steinke, Dec. 29, 1943.*
 Div. 14-233.411-M3
 RL-M-150 *Instruction Manual for Installation of Radiation Laboratory Type A Plugs on Cables, R. R. Steinke, Dec. 29, 1943.*
 Div. 14-233.411-M2
 RL-M-151 *Modification of SCR-584 for Ohio II, B. W. Pike, Feb. 15, 1944.*
 Div. 14-329.132-M7
 RL-M-152A *Falcon System Manual, H. T. Hodges, Jan. 15, 1944.*
 Div. 14-323.2-M3
 RL-M-152B *AN/APG-13 Falcon System Manual, H. T. Hodges, Mar. 31, 1944.*
 Div. 14-323.2-M4
 RL-M-152C *AN/APG-13 System Manual, H. T. Hodges, revised by E. A. Slusser, Aug. 8, 1944.*
 Div. 14-323.2-M6
 RL-M-153 *Instruction Manual for Model 6 Modulator, P. C. Bettler, Feb. 18, 1944.*
 Div. 14-231.3-M4
 RL-M-154 *Instruction Manual for Installation of Chiksan Tool Company 1 1/2-Inch Revolving Joint (Drawing No. 61D1C) on Radiation Laboratory Types B-1 and B-2 Cables (Army-Navy Types RH-27/U and RG-28/U), R. R. Steinke, Jan. 22, 1944.*
 Div. 14-233.422-M8
 RL-M-155A *Instructions for Modifying the SCR-584 Modulator for Use in Aspen Transmitters, A. S. Jerrems, L. A. Ames, Jan. 25, 1944.*
 Div. 14-329.132-M5

CONFIDENTIAL

RL-M-155B	<i>Instructions for Modifying the SCR-584 Modulator for Use in Aspen Transmitters</i> , A. S. Jerrems, Feb. 21, 1944. Div. 14-329.132-M8	RL-M-167	<i>chroscope</i> , J. W. Severinghaus, June 1, 1944. Div. 14-241.31-M2
RL-M-156A	<i>MEW No. 1 Preliminary Instruction Book</i> , L. L. Blackmer, Editor, Mar. 14, 1944.	RL-M-168	<i>Radar Beacon, Mark I Mod 1</i> , D. E. Young, May 29, 1944. Div. 14-328.13-M1
RL-M-156B	<i>MEW No. 2 Preliminary Instruction Book</i> , L. L. Blackmer, Editor, Mar. 14, 1944.	RL-M-169	<i>Handbook of Maintenance Instructions for CXGQ Radar Set</i> , A. E. Caswell, Mar. 15, 1945. Div. 14-321.2-M1
RL-M-156C	<i>MEW No. 3 Preliminary Instruction Book</i> , L. L. Blackmer, Editor, Mar. 9, 1944. Div. 14-322.1-M5	RL-M-169B	<i>Instructions for Type TTX-6RH and Type TTX-10RH Test Sets</i> , S. Katz, Editor, June 8, 1944. Div. 14-251.6-M6
RL-M-156D	<i>Instruction Handbook for Radar Set AN/CPS-1A, Preproduction Sets</i> , L. L. Blackmer, Editor, May 15, 1944. Div. 14-310.12-M3	RL-M-170	<i>Instructions for Types TTX-6(), TTX-9(), TTX-10(), TTX-12() and TS-263/TPS-10 Test Sets</i> , S. Katz, Sept. 13, 1944. Div. 14-251.6-M8
RL-M-157A	<i>Preliminary Handbook of Instructions for H2X Supersonic Trainer, Mark II</i> , A. E. Caswell, April 1944. Div. 14-411.11-M1	RL-M-171	<i>Maintenance Manual for the AN/APN-7 System Modified for the SG Boud</i> , D. J. Dickinson, J. J. Guerrero, June 12, 1944. Div. 14-328.121-M2
RL-M-157B	<i>Preliminary Handbook of Instructions for H2X Supersonic Trainer, Mark III</i> , W. R. Carmody, Sept. 30, 1944. Div. 14-411.11-M3	RL-M-172A	<i>1N28 Loss Measuring Set, Type 7369</i> , S. Roberts, June 29, 1944. Div. 14-233.15-M5
RL-M-158A	<i>Lightweight Loran Transmitter (LLTX)</i> , A. A. McKenzie, Apr. 3, 1944. Div. 14-327.112-M3	RL-M-173	<i>AN/APS-15 Receiver-Indicator Modified for Ground-Range Sweeps and Remote Amplifier</i> , P. Jarmotz, Oct. 10, 1944. Div. 14-241.2-M3
RL-M-159	<i>Preliminary Instruction Manual for Echo-Box for SCR-584</i> , L. L. Davenport, Mar. 6, 1944. Div. 14-251.3-M4	RL-M-173B	<i>Instructions for TSX-2 Spectrum Analyzer</i> , S. Katz, Aug. 5, 1944. Div. 14-251.5-M4
RL-M-160	<i>Technical Manual for SSF Trainer (RCC Model only)</i> , W. N. Simonds, Jr., Editor, Mar. 15, 1944. Div. 14-411.5-M3	RL-M-173C	<i>Instructions for TSX-2 and Specifications on TSX-4SE Spectrum Analyzers</i> , S. Katz, Oct. 5, 1944. Div. 14-251.5-M5
RL-M-161	<i>Preliminary Handbook (Same as RL-M-121) for Experimental Prototype Model Radio Set SCK-820</i> , and Supplement, July 1, 1943, March, 1943. Div. 14-328.112-M2	RL-M-174	<i>Instructions for Types TWS-3 and TWS-3EV Battery-Operated Wattmeters (Preliminary Models of TS-125/AP)</i> , E. A. S. Jacobson, J. W. Severinghaus, F. B. Wood, Aug. 4, 1944. Div. 14-252.4-M7
RL-M-162	<i>Harvey 170-T Loran Transmitter Manual</i> , A. A. McKenzie, May 10, 1944. Div. 14-327.112-M4	RL-M-175	<i>Electronic Cursor for AN/APS-15</i> , W. F. Goodell, Jr., Jan. 30, 1945. Div. 14-242.4-M2
RL-M-163	<i>Instruction Manual for Automatic H2X Camera Model A</i> , R. Sherr, W. R. Woodward, May 25, 1944. Div. 14-264.1-M3	RL-M-176A	<i>Instructions for Types TFK-3HU, TFK-4HU and TFK-6HU Frequency Meters</i> , S. Katz, Aug. 17, 1944. Div. 14-251.41-M1
RL-M-164A	<i>Temporary Instruction Manual for Automatic Radar Camera Model B</i> , R. Sherr, W. R. Woodward, Apr. 15, 1944. Div. 14-264.1-M1	RL-M-176B	<i>Instructions for Types TFK-3HU, TFK-4HU, and TFK-6HU Frequency Meters</i> , S. Katz, Apr. 12, 1945. Div. 14-251.41-M1
RL-M-164B	<i>Temporary Instruction Manual for H2X Camera Model B</i> , R. Sherr, W. R. Woodward, May 1, 1944. Div. 14-264.1-M2	RL-M-177	<i>1N21 Loss Tester, Type 7356</i> , H. B. Huntington, Aug. 21, 1944. Div. 14-233.14-M4
RL-M-165	<i>Instruction Manual for Echo-Box Test Kit</i> , H. H. Wheaton, J. M. Wolf, June 1, 1944. Div. 14-251.3-M5	RL-M-178	<i>Preliminary Instruction Manual for AN/APG-15</i> , B. W. Weber, Nov. 5, 1944. Div. 14-323.12-M5
RL-M-166	<i>Instructions for Operation of High-Gain Video Amplifier for P4-E Syn-</i>		

CONFIDENTIAL

- RL-M-178B *Preliminary Instruction Manual for AN/APG-15*, B. W. Weber, Jan. 3, 1945. Div. 14-323.12-M5
- RL-M-179 *Computer Mark 14, AN/APA-30 XN-1 Instruction Manual*, E. H. Turner, D. Sayre, Oct. 16, 1944. Div. 14-323.2-M7
- RL-M-186A *Preliminary Technical Manual for AEW*, A. E. Caswell, Dec. 4, 1944. Div. 14-321.14-M3
- RL-M-181 *Handbook of Instructions for the Preparation of Maps for the HX Supersonic Trainer*, W. R. Carmody, September 1944. Div. 14-411.11-M2
- RL-M-182 *Preliminary Technical Manual for Falcon Trainer AN/APG-13-T1*, W. Roth, W. N. Simonds, Jr., Editor, Oct. 26, 1944. Div. 14-411.22-M1
- RL-M-183 *Handbook of Procedures for Mobile Charting Units, Air Transportable Loran System*, B. W. Sitterly, Mar. 30, 1946. Div. 14-327.1-M5
- RL-M-184 *Description of the Experimental ROSEBUD*, D. J. Dickinson, J. J. Guarrera, Oct. 26, 1944. Div. 14-328.121-M7
- RL-M-185 *Preliminary Instruction Book for Shore Bombardment Beacon Navy Model, Mark 2 Mod 0 and Mod 1*, J. C. Reed, Oct. 31, 1944. Div. 14-328.13-M2
- RL-M-186A *Instructions for Type TBN-3KV Thermistor Bridge*, E. A. S. Jacobson, J. W. Severinghaus, Jan. 15, 1945. Div. 14-252.42-M3
- RL-M-187 *Instruction Manual for Model 17 Modulator*, C. R. Ricker, Mar. 1, 1946. Div. 14-231.3-M8
- RL-M-188 *Operating Instructions for Sweep Calibrator, Model B*, R. P. Abbenhouse, Dec. 7, 1944. Div. 14-251.2-M4
- RL-M-189 *Preliminary Handbook of Instructions for Supersonic Trainer, AN/APQ-7-T1 (Eagle Trainer)*, W. R. Carmody, June 14, 1945. Div. 14-411.1-M2
- RL-M-190 *IN20 Noise-Measuring Set, Type 7438*, S. Roberts, Dec. 21, 1944. Div. 14-233.151-M5
- RL-M-191 *IN21 Noise Tester, Type 11044*, H. B. Huntington, Jan. 9, 1945. Div. 14-233.15-M7
- RL-M-192 *Preliminary Instructions for the Manual Bearing Unit*, C. A. Smith, Jan. 9, 1945. Div. 14-310.32-M3
- RL-M-193A *Handbook of Operating and Maintenance Instructions for Test Set TS-259(XR-1)/AP with Supplements on Test Sets TS-259(XR-2)/AP and TS-259(XR-3)/AP and Signal Generator TS-259/AP*, S. Katz, F. B. Wood, Feb. 17, 1945. Div. 14-251.6-M11
- RL-M-194 *Handbook of Operating and Maintenance Instructions for Echo Boxes TES-3MK and TES-9MK*, F. B. Wood, Editor, Mar. 24, 1945. Div. 14-251.3-M16
- RL-M-195A *Operating Instructions for the Model G Synchronizer*, R. P. Abbenhouse, F. N. Gillette, Mar. 15, 1945. Div. 14-251.8-M3
- RL-M-196 *Preliminary Installation and Operating Instructions for Radar Set AN/CPS-6*, H. M. Knight, Editor, Feb. 3, 1945. Div. 14-322.1-M9
- RL-M-197 *Handbook of Maintenance Instructions for AN/APA-40 (Micro-II Mk II) Airborne Attachment to AN/APS-15*, J. B. Platt, Feb. 7, 1945. Div. 14-329.12-M3
- RL-M-198A *Instructions for TGS-6DE Bore-sighting Signal Generator (Preliminary Model of Test Set TS-348/AP)*, E. A. S. Jacobson, Feb. 10, 1945. Div. 14-251.6-M10
- RL-M-199 *Preliminary Instruction Manual for X-Band Coincident Beacon XCB (Mark I) AN/APX-14*, J. R. Lien, Mar. 1, 1945. Div. 14-328.111-M5
- RL-M-200 *Preliminary Maintenance and Operating Instructions for AN/APX-15*, B. L. Birchard, Mar. 1, 1945. Div. 14-324.1-M3
- RL-M-201 *Theory of Operation of AK11 Circuits*, A. E. Caswell, Apr. 15, 1945. Div. 14-321.14-M7
- RL-M-202 *Preliminary Maintenance and Operating Instructions for the TS-364/APX-15 Test Set*, B. L. Birchard, Apr. 4, 1945. Div. 14-251.6-M13
- RL-M-203 *Instructions for TBN6SE Thermistor Bridge*, E. A. S. Jacobson, November, 1945. Div. 14-252.4-M8
- RL-M-204 *Handbook of Operating and Maintenance Instructions for Test Set TGI-3CA*, C. A. Meyer, Mar. 28, 1945. Div. 14-251.6-M12
- RL-M-205 *Handbook of Instructions for the Preparation of Mountain Maps for the HX Supersonic Trainer*, W. R. Carmody, April 1945. Div. 14-411.11-M6
- RL-M-206 *Instructions for Installation and Maintenance of Waffle Relief Maps in Ultrasonic Trainers*, P. Rosenberg, Apr. 36, 1945. Div. 14-423-M1
- RL-M-207 *TFX-34RL Fixed Frequency Standard*, H. A. Gardner, Apr. 26, 1945. Div. 14-251.42-M1

CONFIDENTIAL

RL-M-208	<i>TFX-35RL Fixed Frequency Standard</i> , H. A. Gardner, Apr. 26, 1945. Div. 14-251.42-M2	RL-M-222	<i>Handbook of Operating Instructions for Loran Low-Frequency Converter CV-27/UPN</i> , A. A. McKenzie, Apr. 27, 1945. Div. 14-327.113-M2
RL-M-209	<i>TFX-36RL Fixed Frequency Standard</i> , H. A. Gardner, Apr. 26, 1945. Div. 14-251.42-M3	RL-M-223	<i>Operating Instructions for Sweep Calibrator Model B-8127</i> , R. P. Abbenhouse, June 20, 1945. Div. 14-251.2-M5
RL-M-210	<i>Replacement Pressurized RF Unit for AN/APS-15A</i> , J. Sterling, D. L. Hagler, F. R. Banks, Jr., F. E. Towseley, Apr. 10, 1946. Div. 14-329.12-M10	RL-M-224	<i>CXHR Maintenance Manual</i> , J. D. Fairbank, Sept. 21, 1945. Div. 14-322.2-M3
RL-M-211	<i>Preliminary Instruction Manual for S-Band Coherent Transponder Black Maria RT-74/APN</i> , C. A. Meyer, Sept. 20, 1945. Div. 14-324-M1	RL-M-225	<i>Handbook of Maintenance Instructions for Loran Low-Frequency Converter CV-27/UPN</i> , A. A. McKenzie, July 6, 1945. Div. 14-327.113-M3
RL-M-212	<i>Operating Instructions for Radiation Laboratory Model 5 Synchroscope</i> , R. P. Abbenhouse, July 26, 1945. Div. 14-251.72-M7	RL-M-226	<i>Alignment Procedure for Cudillus Airborne Synchro System</i> , W. R. Gustafson, B. C. Carlson, June 28, 1945. Div. 14-321.14-M10
RL-M-213	<i>Maintenance Manual for Model AN/APN-21NR Racon</i> , D. J. Dickinson, R. H. Hazen, Apr. 11, 1945. Div. 14-328.121-M8	RL-M-227	<i>Preliminary Handbook of Operating and Maintenance Instructions for Model AN/APA-46 Aircraft Radar Equipment</i> , H. Wenetsky, Editor, June 1, 1945. Div. 14-329.12-M6
RL-M-214	<i>Handbook of Maintenance Instructions for the AN/APG-8 Airborne Radar Gunsighting Equipment</i> , J. V. Holdam, Jr., May 18, 1945. Div. 14-323.12-M7	RL-M-228	<i>AN/CPA-7 Operations Room Equipment Supplementing Radio Set AN/CPS-1</i> , W. M. Rieth, July 2, 1945. Div. 14-322.1-M10
RL-M-215	<i>Preliminary Instruction Manual for AN/APG-15B</i> , J. V. Holdam, Jr., June 1, 1945. Div. 14-323.12-M8	RL-M-229	<i>Preliminary Book of Maintenance Instructions for Shipboard Components of AKH</i> , Lt. R. L. Kellner, Editor, July 21, 1945. Div. 14-321.14-M12
RL-M-216	<i>Handbook of Operating and Maintenance Instructions for Dummy Load TS-23/AP</i> , F. B. Wood, Apr. 9, 1945. Div. 14-233-M3	RL-M-230	<i>Hypograph Instruction Manual</i> , L. Rovner, Aug. 8, 1945. Div. 14-213-M1
RL-M-217	<i>Instructions for Types TFX-11GA, TFX-18GA, TFX-19GA, TFX-20EC, TFX-31EC, Model 31 and Similar Types of Micrometer Frequency Meters</i> , F. B. Wood, Editor, May 3, 1945. Div. 14-251.41-M3	RL-M-231	<i>Instructions for Type TSK-5SK Spectrum Analyzer</i> , F. B. Wood, Feb. 11, 1946. Div. 14-251.5-M8
RL-M-218	<i>Preliminary Technical Manual for SCR-584 MTI Modification Kit No. MC-645-AS and Fan Beam Search Antenna</i> , H. B. Bekkar, Editor, June 1, 1945. Div. 14-263-M5	RL-M-232	<i>Instruction Manual for Model 20 Laboratory Modulator</i> , C. R. Ricker, Feb. 19, 1946. Div. 14-231.3-M7
RL-M-219	<i>Pre-flight Check of Radio Set AN/APQ-7</i> , M. Boas, Sept. 25, 1945. Div. 14-329.12-M8	RL-M-233	<i>Black Maria Check Set TS-495/APN</i> , A. Fong, Nov. 16, 1945. Div. 14-251.6-M15
RL-M-220	<i>Preliminary Instructions on Modification Kit MC-627 for Radio Set SCR-584</i> , G. E. Brunette, May 1, 1945. Div. 14-329.16-M1	RL-M-234	<i>Instructions for TS-416/AP Check Set</i> , J. W. Severinghaus, Feb. 11, 1946. Div. 14-251.6-M16
RL-M-220B	<i>Preliminary Instructions on Modification Kit MC-627 for Radio Set SCR-584 (Revised)</i> , G. E. Brunette, Nov. 28, 1945. Div. 14-329.16-M1	RL-M-235	<i>Additional Modification, Calibration, and Plotting Procedures for RC-294 Plotting Equipment</i> , J. E. Ward, Feb. 18, 1946. Div. 14-265.4-M6
RL-M-221	<i>Handbook of Maintenance Instructions for AN/APG-15-T1 Trainer</i> , A. R. Caswell, June 23, 1945. Div. 14-411.22-M2	RL-M-236	No report.
		RL-M-237	<i>Instructions for TRK-3KL Impedance Bridge</i> , E. C. Simmons, F. B. Wood, Feb. 13, 1946. Div. 14-252.1-M8
		RL-M-238	<i>Instructions for K-Band Bench Testing</i> , A. J. Zink, F. B. Wood, Apr. 5, 1946. Div. 14-252.5-M4
		RL-M-239	<i>Operating Instructions for Model 12 Modulator</i> , A. C. Donovan, Sept. 17, 1945. Div. 14-231.3-M6

CONFIDENTIAL

- RL-M-240 *Preliminary Instructions for Radar System MK 35*, M. Boas, Nov. 30, 1945. Div. 14-323.32-M6
- RL-M-241 *Preliminary Operation and Maintenance Handbook for Release Point Indicator AN/ARA-17*, J. D. Horgan, J. E. Ward, Nov. 1, 1945. Div. 14-265.3-M5
- RL-M-242 *Preliminary Description of MK 56 Gun Fire-Control System*, W. R. Carmody, A. D. Ehrenfried, Dec. 15, 1945. Div. 14-323.32-M7
- RL-M-243 *Handbook of Maintenance Instructions for AN/APA-53 Indicator Assembly*, W. R. Shannwhite, Lt. R. L. Kellner, Oct. 24, 1945. Div. 14-321.14-M17
- RL-M-244 *Handbook of Maintenance Instructions for AN/AIC-6 Intercommunication System*, W. R. Shannwhite, Lt. R. L. Kellner, Oct. 23, 1945. Div. 14-261-M3
- RL-M-245 *HMI for Cadillac II Power Supply*, Lt. R. L. Kellner, Oct. 23, 1945. Div. 14-235.1-M8
- RL-M-246 *Preliminary Instructions for Radar Set AN/APG-13B*, M. Boas, Sept. 15, 1945. Div. 14-323.2-M10
- RL-M-247 *Nonmangle*, Lt. J. B. Higley, T. A. Farrell, Jr., Nov. 30, 1945. Div. 14-329.142-M3
- RL-M-248 *Operating Instructions for the K-Raid Rapid Scan System*, C. J. Swartwout, Mar. 20, 1946. Div. 14-234.322-M6
- RL-M-249 *Operating and Maintenance Instructions for Indicator for Rapid-Scan System*, P. Jurinatz, Apr. 5, 1946. Div. 14-242.12-M8
- Special Reports**
- RL-S-1 *Testing of Skintrons*, H. C. Kelly, R. W. Hull, Dec. 30, 1943. Div. 14-242.22-M1
- RL-S-1a *Testing of Skintrons, Supplement*, H. C. Kelly, R. W. Hull, W. D. Hope, May 6, 1944. Div. 14-242.22-M1
- RL-S-2 *Target Raft Transponder*, D. R. Young, Jan. 27, 1944. Div. 14-328.2-M1
- RL-S-3 *Wolworth Waveguide Bends*, R. M. Walker, Jan. 28, 1944. Div. 14-233.422-M9
- RL-S-4 *A Comparison of Positive and Negative Intensity Modulation of PPI Displays*, L. J. Haworth, Jan. 26, 1944. Div. 14-242.3-M9
- RL-S-5 *A High Resolution Set*, R. M. Emberson, Jan. 26, 1944. Div. 14-310.32-M5
- RL-S-6 *General Description, Special Installation Requirements, and Mounting Dimensions of AN/APG-5 (AKO) Airborne Range Only Equipment*, T. E. Lawrence, Jan. 31, 1944. Div. 14-323.11-M1
- RL-S-7 *Notes on the Power Output of 723A Tubes*, J. S. Kirby-Smith, Feb. 19, 1944. Div. 14-241.41-M7
- RL-S-8 *Some General Microwave Anti-Jam Design Considerations and Performance of a Special Receiver*, P. R. Bell, Jr., F. M. Ashbrook, Feb. 21, 1944. Div. 14-262.1-M1
- RL-S-9 *Comparison of P7 Screen-Test Methods*, W. R. Nottingham, Mar. 14, 1944. Div. 14-242.231-M8
- RL-S-10 *Detection of Propeller and Sumo Modulations*, J. L. Lawson, Editor, May 16, 1944. Div. 14-324.1-M2
- RL-S-11 *Screen Generator Life Tests*, G. J. Plain, Apr. 8, 1944. Div. 14-214.3-M6
- RL-S-12 *Possible Radar Solutions to the Problem of Accurate Siting of Field Artillery*, A. Roberts, Apr. 7, 1944. Div. 14-328.113-M1
- RL-S-13 *Radar Photo Reconnaissance*, C. F. J. Overhage, Apr. 10, 1944. Div. 14-264-M5
- RL-S-14 *MTR Computing Radar Sight*, G. F. Duvall, Apr. 10, 1944. Div. 14-323.5-M2
- RL-S-15 No report.
- RL-S-16 *Bureau Tests with AN/APS-6*, R. M. Alexander, June 2, 1944. Div. 14-328.113-M2
- RL-S-17 *Focus Coil Control for Cathode-Ray Tubes*, R. D. Rawcliffe, May 17, 1944. Div. 14-242.24-M3
- RL-S-18 *Model 5 Synchroscope*, G. H. Nibbe, June 2, 1944. Div. 14-251.72-M6
- RL-S-19 *Ground-Position Indicator for Radar Navigation and Bombing*, B. Chance, I. A. Greenwood, Jr., W. J. Tull, J. W. Gray, June 2, 1944. Div. 14-329.142-M1
- RL-S-20 *Window Tests on AN/CPS-6, Leesburg, Florida, June 7 and 9, 1944*, L. B. Linford, J. Millman, July 8, 1944. Div. 14-262.1-M2
- RL-S-21 *A Procedure for Statistical Analysis of Depth Soundings*, F. B. Hildebrand, P. D. Crout, July 29, 1944. Div. 14-600-M4
- RL-S-22 *AN/APS-10 Airborne Radar*, A. Longacre, July 12, 1944. Div. 14-321.1-M1
- RL-S-23 *DOLPHIN, Remotely Controlled Torpedo Rack Actuating Mechanism*, G. F. Duvall, Aug. 29, 1944. Div. 14-323.5-M3
- RL-S-24 *Japanese Microwave Radar*, A. M. Clogston, Aug. 26, 1944. Div. 14-262.3-M1

CONFIDENTIAL

RL-S-25	<i>Flight Tests on AN/APS-6A</i> , R. M. Alexander, Nov. 30, 1944. Div. 14-320.1-M7	RL-S-42	<i>Alignment Kit (Torpedo Rack) Mark 1 Mod 0</i> , G. F. Duvall, Mar. 17, 1945. Div. 14-323.5-M5
RL-S-26	<i>Airborne Early Warning, AEW</i> , W. K. Murray, Sept. 1, 1944. Div. 14-321.14-M1	RL-S-43	<i>The So-called Standard Target</i> , A. H. Brown, Mar. 10, 1945. Div. 14-253.2-M1
RL-S-27	<i>Airborne Early Warning, AEW</i> , (RL-S-26 plus additional material), W. K. Murray, Sept. 1, 1944. Div. 14-321.14-M1	RL-S-41	<i>H2K Radar Displays</i> , C. F. J. Overhage, Apr. 9, 1945. Div. 14-329.12-M4
RL-S-28	<i>Catalog of Microwave Test Equipment</i> , F. B. Wood, Editor, Sept. 30, 1944. Div. 14-121.2-M4	RL-S-45	<i>Ultrasonic Radar Trainer PPI Photographs of a Simulated H2X Bombing Mission over Tokyo</i> , P. Rosenberg, Mar. 24, 1945. Div. 14-411.11-M4
RL-S-29	<i>X-Band Waveguide Corrosion Proofing</i> , R. M. Walker, Oct. 6, 1944. Div. 14-223-M2	RL-S-46	<i>Thumbnail Sketch for February and March</i> , D. C. White, Apr. 2, 1945. Div. 14-501-M13
RL-S-30	<i>Interconnecting AN/APA-5 and Army Radar Sets</i> , J. X. Mulvey, Jr., Aircraft Radio Laboratory, Oct. 2, 1944. Div. 14-329.12-M2	RL-S-47	<i>Release Point Indicator Used in Conjunction with BC-294</i> , J. D. Horgan, J. E. Ward, May 16, 1945. Div. 14-265.3-M3
RL-S-31	<i>A Production Analysis of the Wartime Radio and Radar Industry</i> , A. A. Bright, J. Exter, Nov. 1, 1944. Div. 14-600-M6	RL-S-48	<i>Tabulation of CRT Screen Properties</i> , A. B. White, May 1, 1945. Div. 14-242.23-M1
RL-S-32	<i>AEW Bedford Trials</i> , W. Moore, Oct. 19, 1944. Div. 14-321.14-M2	RL-S-49	<i>Steady-State Vibration of Two-Spring Mechanical System</i> , F. B. Hildebrand, Apr. 14, 1945. Div. 14-113-M4
RL-S-33	<i>Preliminary Testing of the Houston Corporation AN/APS-10 Scanner</i> , G. E. Hewitt, Dec. 23, 1944. Div. 14-234-M2	RL-S-50	<i>AEW Tactical Tests at Brigantine</i> , H. G. Weiss, June 15, 1945. Div. 14-321.14-M8
RL-S-34	<i>Termination Report on Radar Photo Reconnaissance Project</i> , C. F. J. Overhage, Nov. 16, 1944. Div. 14-264-M7	RL-S-51	<i>PPI Photographs from AEW</i> , S. D. Bennett, July 5, 1945. Div. 14-321.14-M11
RL-S-35	<i>Specifications for 15-Mc Supersonic Crystal for Crystal Cartridge Types 3 and 7B</i> , P. Rosenberg, Jan. 22, 1945. Div. 14-422.1-M2	RL-S-52	<i>Anticounter Circuits for AEW</i> , V. Josephson, L. B. Linford, J. L. Lawson, C. H. Palmer, Jr., Aug. 1, 1945. Div. 14-321.14-M13
RL-S-36	<i>Tactical Use of Delayed PPI Scopes of the AEW System</i> , H. M. James, Jan. 11, 1945. Div. 14-321.14-M5	RL-S-53	<i>Thumbnail Sketch for April and May</i> , D. G. White, May 30, 1945. Div. 14-501-M13
RL-S-37	<i>Preliminary Report on Single Aircraft Target Ranges of AEW</i> , S. D. Bennett, Jan. 27, 1945. Div. 14-321.14-M6	RL-S-54	<i>Pre-flight Check of Radio Set AN/APQ-7</i> , M. Boas, June 15, 1945. Div. 14-329.12-M7
RL-S-38	<i>Waveforms, Voltage and Resistance Measurements in AN/APA-5 Indicator Equipment</i> , G. Q. Lipscomb, Jan. 31, 1945. Div. 14-242.12-M5	RL-S-55	<i>Proposed Antenna for Panoramic Radar</i> , W. O. Gordy, May 22, 1945. Div. 14-234.326-M4
RL-S-39	<i>A Proposed Design for MX-180/A Corner Reflector, Float Marker, Radar, Draggable</i> , P. D. Tilton, Feb. 5, 1945. Div. 14-267.1-M4	RL-S-56	<i>Velocity of Propagation of 15-Mc Ultrasonic Pulses in Liquids</i> , P. Rosenberg, Nov. 5, 1945. Div. 14-423-M2
RL-S-40	<i>Thumbnail Sketch for December and January</i> , D. G. White, Feb. 3, 1945. Div. 14-501-M13	RL-S-57	<i>AN/APS-15A and AN/APS-15B Tests</i> , R. C. Ottens, Nov. 21, 1945. Div. 14-253.1-M4
RL-S-41	<i>Catalog of Microwave Test Equipment</i> , E. A. S. Jacobson, Editor, Aug. 25, 1945. Div. 14-121.2-M0	RL-S-58	<i>Tables of Fourier Transforms of Fourier Series, Power Series, and Polynomials</i> , P. Austin, R. C. Spencer, E. Chisholm, E. Fine, J. Schwartz, Aug. 30, 1945. Div. 14-112-M6
		RL-S-59	<i>Radar Bombing Techniques</i> , V. L. Bostick, Apr. 30, 1940. Div. 14-320.11-M2

CONFIDENTIAL

RL-S-60	<i>Tables for Use with Torpedo Director Mark 33 Mod 1: Part I, Own Speed—10 Knots; Part II, Own Speed—12 Knots; Part III, Own Speed—14 Knots; Part IV, Own Speed—23 Knots; G. F. Duvall, June 29, 1945.</i> Div. 14-323.5-M6	RL-T-1	<i>Lecture Notes, J. C. Slater.</i>
RL-S-61	<i>Mechanical and Electrical Tests of the General Electric Company Scanner for the AN/APS-10 System, G. E. Hewitt, July 14, 1945.</i> Div. 14-234.323-M4	RL-T-2	<i>Notes on Microwaves, W. W. Hansen, prepared by S. Seely and E. C. Pollard, Oct. 20, 1941.</i> Div. 14-121.1-M2
RL-S-62	<i>The Manual Plotting System RC-305, J. W. Brean, J. E. Ward, J. D. Horgan, Aug. 31, 1945.</i> Div. 14-265.3-M4	RL-T-3	<i>Rectifier Filter Circuit Analysis, H. J. White, Feb. 17, 1942.</i> Div. 14-212.1-M1
RL-S-63	<i>Torpedo Director Mark 33 Mod 1, G. Duvall, R. G. Page, Nov. 30, 1945.</i> Div. 14-323.5-M7	RL-T-4	<i>Analysis of an Amplidyne Servo-Mechanism, C. C. Lawry, Jr., Feb. 10, 1942.</i> Div. 14-214.1-M1
RL-S-64	<i>Antenna Catalogue, J. J. Brady, Oct. 8, 1945.</i> Div. 14-234.5-M16	RL-T-5	<i>Transmission Lines and Waveguides, Similarities and Differences, N. H. Frank, June 4, 1942.</i> Div. 14-233.41-M2
RL-S-65	<i>Supplementary Report on Aircraft Target Ranges of AEW, S. D. Bennett, Apr. 26, 1946.</i> Div. 14-321.14-M20	RL-T-6	<i>Explanation of Impedance Matching, H. Krutter, July 7, 1942.</i> Div. 14-252.1-M3
RL-S-66	<i>Type Test of the Fairchild Radar Recording Camera, D. G. Bagley, R. C. Bahish, Oct. 30, 1945.</i> Div. 14-264.1-M5	RL-T-7	<i>Paraboloid Diffraction Patterns from the Standpoint of Physical Optics, R. C. Spencer, Oct. 21, 1942.</i> Div. 14-234.22-M3
RL-S-67	<i>Operational Procedure for AN/AP-1-5, W. J. Deerhake, K. E. Schreiner, Oct. 26, 1945.</i> Div. 14-329.12-M9	RL-T-8	<i>Microwave Radar, Volume I, Theory and Practice of Pulsed Circuits, D. G. Fink, July 1942.</i> Div. 14-212.4-M1
RL-S-68	<i>Radar R-F Test Points, A. H. Brown, Dec. 15, 1945.</i> Div. 14-233-M6	RL-T-9	<i>Wave Guide Handbook, Section I, Sept. 24, 1942; Section II, Attenuation in Wave Guides, Oct. 2, 1942; Section III, Obstacles in Wave Guides, Nov. 11, 1942; Section IV, Bends and T-Junctions in Wave Guides, Dec. 4, 1942.</i> Div. 14-233.422-M5
RL-S-69	<i>A Survey of the AN/TPS-10, Little Abner, T. M. Moore, Apr. 26, 1946.</i> Div. 14-322.1-M12	RL-T-10	<i>Section V, Dielectric Structures in Wave Guides, N. H. Frank, Feb. 9, 1943.</i> Div. 14-233.412-M5-7, 9
RL-S-70	<i>X-Band Sealed Standard Cavities, F. J. Gaffney, Feb. 13, 1946.</i> Div. 14-211.5-M7	RL-T-11	<i>Theory of Impedance and Admittance Diagrams and Allied Subjects, S. Seely, Feb. 18, 1943. Reprinted by the U. S. Navy as NAVSHIPS 900.038.</i> Div. 14-252.1-M5
RL-S-71	<i>Evaluation of Specifications for P14 CRT Screens, A. B. White, Jan. 14, 1946.</i> Div. 14-242.231-M11	RL-T-12	<i>Reflection Coefficients and Impedance Charts S. A. Goudsmit, Nov. 9, 1942.</i> Div. 14-252.1-M4
RL-S-72	No report.	RL-T-13	<i>Rectifier Filter Circuit Analyses, Supplement to Report RL-T-3, H. J. White, Nov. 4, 1942.</i> Div. 14-212.1-M2
RL-S-73	<i>Radar Components that Affect Range, L. Davis, Jr., Dec. 10, 1945.</i> Div. 14-243-M4	RL-T-14	<i>Microwave Technique as of May 1943, J. M. Peterson, Editor, and others, May 5, 1943. Reprinted by the U. S. Navy as NAVSHIPS 900.028.</i> Div. 14-230-M1
RL-S-74	<i>Operation for Peak Performance, R. D. O'Neal, Dec. 20, 1945.</i> Div. 14-268-M1	RL-T-15	<i>Use and Deviation of a Z, θ Chart, J. Reed, May 18, 1943.</i> Div. 14-233.41-M5
RL-S-75	<i>MK 151 Director, H. S. Sommers, Jr., Mar. 5, 1946.</i> Div. 14-323.32-M8		<i>Modulator Text, A. S. Jerrems, E. B. Kravitz, Editors, Dec. 17, 1943, Second Edition, A. S. Jerrems, Editor,</i>
RL-S-76	<i>MEW Close Control, E. Miller, Apr. 30, 1946.</i> Div. 14-265.1-M9		
RL-S-77	<i>AFC Operation and Maintenance, J. G. Jelatis, J. W. Woodbury, H. M. Herreman, Jan. 25, 1946.</i> Div. 14-232.15-M4		

CONFIDENTIAL

- RL-T-16 June 23, 1944. Div. 14-231-M6
Shock Mounting and Vibrations, P. D. Crout, May 18, 1944. Div. 14-221-M1
- RL-T-17 *Introduction to Alternating Currents, Q. Values, and Transmission Lines*, E. W. Samson, Aug. 29, 1944. Div. 14-233.43-M3
- RL-T-18 *General Lecture Series on Radar Components*, H. H. Wheaton, Editor, Dec. 1, 1944. Div. 14-210-M3

Microfilmed Informal Reports

- MTI Using Coherent Intermediate Frequency*, A. G. Emalie, Aug. 22, 1945. Div. 14-263-M7
- AN/APA-5, *Preliminary Report on 1,000-Foot Range from July 18 to 22, 1944*, Aug. 7, 1944. Div. 14-253.1-M1
- AN/APA-5, *Preliminary Report on 5,000-Foot Range from August 4 to 12, 1944*, Aug. 17, 1944. [Corrected Sept. 6, 1944.] Div. 14-253.1-M2
- AN/APA-5, *Preliminary Report on 15,000-Foot Range from August 25 to 28, 1944*, Sept. 6, 1944. Div. 14-253.1-M3
- AN/APG-13H, *Vulture*, E. H. B. Bartelink, Div. 14-323.2-M12
- AN/APG-21, *Terry*, E. A. Slusser, Div. 14-323.2-M13
- Letters Discussing ASP-25 and Related Ideas Concerning ASH*, E. H. B. Bartelink, Div. 14-323.2-M14
- History of AN/APG-5, ARO*; A. F. Sise, B. P. Bogert, Jan. 15, 1946. Div. 14-323.11-M4
- Proposed Sea Echo Measurements with the Airborne MTI Plane*, H. Goldstein, RL-42, Aug. 14, 1945. Div. 14-122.112-M2
- A New Secondary Modulation Indicator and the Radar System Developed for Testing It*, F. G. Dunnington, RL-45, Mar. 25, 1946. Div. 14-242.12-M7
- A Continuously Indicating Audio Spectroscope for C-II Systems*, R. H. Dicke, RL-61, Dec. 30, 1943. Div. 14-251.5-M3
- Preliminary Manual on the SCR-584 Class Support System, Technical Operation, Employment and Maintenance*; ASB Reference No. 3, E. M. Lyman, R. W. Larson, British Branch Radiation Laboratory, Advanced Service Base; Jan. 5, 1945. Div. 14-265.1-M3
- Pulse Doppler with Reference to Ground Speed Indication*, D. Sayre, RL-63, Mar. 20, 1944. Div. 14-124-M2
- Lecture Outline for Course on AN/APG-13, Falcon*, Herbert H. Wheaton, RL-64.2, Aug. 3, 1944. Div. 14-323.2-M5
- Bibliography of Radiation Laboratory Literature on MTI as of February 6, 1945*, RL-65, Feb. 6, 1945. Div. 14-263-M2
- Some MTI Nomenclature in Use at Radiation Laboratory, MIT*, R. A. McConnell, RL-65, May 2, 1945. Div. 14-263-M3
- Estimated Limitations of Kit MC-642, MTI for SCR-584*, F. Cunningham and R. A. McConnell, RL-65, June 18, 1945. Div. 14-263-M6
- Notes on the Rebecca-II System from Information Obtained at TRE*, A. Roberts, RL-71, Aug. 25, 1943. Div. 14-327.3-M1
- Unified Radar Banknight, URBS*, E. B. Meservey, RL-71.0, July 31, 1945. Div. 14-329.143-M2
- On Surfaces that Reflect Radio Waves Poorly*, O. Halpern, RL-72, Nov. 4, 1942. Div. 14-132-M1
- Notes on the European and Eastern Atlantic S. S. Loran Systems*, R. H. Woodward, W. Lees, BRL-83, Apr. 17, 1945. Div. 14-327.1-M4
- Project Falcon, Air-to-Surface Vessel Radar Range for 70-Mm Cannon in R-25*, C. F. J. Overhage, RL-91, Dec. 15, 1943. Div. 14-323.2-M1
- Project Falcon, AN/APG-13*, C. F. J. Overhage, RL-91, Jan. 21, 1944. Div. 14-323.2-M2
- Frequency Pulling of ARO 464 Lighthouse Cavities*, E. A. Slusser, RL-91, Feb. 14, 1944. Div. 14-241.42-M3
- The Effects of Cavity Bias on the ARO Cavity Operated by the ARO Modulator*, E. A. Slusser, RL-91, Apr. 27, 1944. Div. 14-323.11-M2
- Some Factors Governing the Range of AI Sets*, T. W. Bonner, RL-91, May 3, 1944. Div. 14-326.1-M4
- Reduction of the Effects of Ground Clutter on the SCR-720*, E. W. Cowan, RL-91, June 7, 1945. Div. 14-263.1-M3
- Flight Test of an Experimental Horn-Fed Antenna for H2X*, R. C. Ottens, J. E. Woodward, RL-91.3, Dec. 1, 1944. Div. 14-234.21-M8
- Proposal for Extending the Range of Shoran or M-II Beacon Coverage by the Use of GPI*, W. J. Tull, RL-91.3, July 20, 1945. Div. 14-327.2-M2
- Errors of Optical Range Determination*, Paul R. Halmos, RL-91.5, July 20, 1945. Div. 14-243-M3
- The Solenoid Camera Drive*, C. W. Mautz, RL-91.5, Oct. 10, 1945. Div. 14-264.1-M4
- Tests of AGI-1 Installed in Tail of B-24D Airplane*, L. J. Laslett, Charles F. West, G. W. Curran, RL-94, Mar. 5, 1943. Div. 14-323.13-M1
- Calculation of Errors in Conical Scanning GL Systems Arising from Detuning when the Transmitter Frequency is Pulled during the Rotation*, L. J. Laslett, RL-94, March 1943. Div. 14-234.321-M3
- Summary of Work on Propeller Modulation at the Radiation Laboratory*, J. M. Sturtevant, RL-193, Mar. 21, 1944. Div. 14-324.1-M1
- Coherent Integration*, A. G. Emalie, RL-103, May 16, 1944. Div. 14-125-M8

CONFIDENTIAL

PART III

SUBJECT INDEX OF DIVISION 14 AND RADIATION LABORATORY REPORTS

THIS INDEX carries only the identifying name of the report and, in the case of NDRC reports, an indication of the laboratory or company issuing it. The date of issuance is included to differentiate Progress Reports of the same title. Complete details of each report are given in Part I, Division 14 NDRC Reports, and in Part II, Radiation Laboratory Reports, which are designated as 14- and RL- respectively.

ABSORBENT MATERIALS, see also Dielectrics

Special Protective Coatings, Progress Report, Jan. 14, 1944 [du Pont]. 14-211
Special Protective Coatings, Progress Report, Feb. 14, 1944 [du Pont]. 14-241
Special Protective Coatings, Monthly Report, Sept. 13, 1944 [du Pont]. 14-247
Monthly Summary and Informal Monthly Progress Report on Protective Coatings, Mar. 14, 1944 [du Pont]. 14-251
Monthly Summary and Informal Monthly Progress Report on Protective Coatings, Apr. 14, 1944 [du Pont]. 14-264
Monthly and Informal Monthly Progress Report on Special Protective Coatings, May 13, 1944 [du Pont]. 14-273
Special Protective Coatings, Progress Report, June 13, 1944 [du Pont]. 14-286
Special Protective Coatings, Progress Report, July 14, 1944 [du Pont]. 14-291
Monthly Summary and Informal Progress Report, Aug. 11, 1944 [du Pont]. 14-306
Special Protective Coatings, Monthly Summary, Oct. 13, 1944 [du Pont]. 14-325
The Preparation of Saabø Films for Scheme A [du Pont]. 14-343
Survey of Binder (Use A), Special Protective Coatings—I [du Pont]. 14-344
Special Protective Coatings—II, Formulation Studies—Composition Variables [du Pont]. 14-345
Special Protective Coatings—III, Formulation Studies—Physical Processing Variables [du Pont]. 14-346
Special Protective Coatings—IV, Pigment Evaluation Studies [du Pont]. 14-347
Special Protective Coatings—V, Film Thickness Evaluation [du Pont]. 14-348

ABSORBENT MATERIALS (Continued)

Special Protective Coatings—VI, Cross-Knifed Films for Practical Work at MIT [du Pont]. 14-349
Special Protective Coatings—VII, Knife Coating on Semiworks Wheels [du Pont]. 14-350
Special Protective Coatings—VIII, Large Scale Coating Trials Investigation of Fabric Coating Equipment [du Pont]. 14-351
Special Protective Coatings—IX, Spray Trials at Toledo [du Pont]. 14-352
Special Protective Coatings—X, Development of Cement and Paint Making Procedures for Scheme A [du Pont]. 14-353
Special Protective Coatings—XI, Development of Machine-Spraying Process for Scheme A [du Pont]. 14-354
Special Protective Coatings—XII, Characterization of Metal Flokes [du Pont]. 14-355
Special Protective Coatings—XIII, Preparation of Film by Calendering [du Pont]. 14-356
Special Protective Coatings; Methods of Analysis for Aluminum Film and Its Ingredients [du Pont]. 14-357
Special Protective Coatings, Monthly Summary, Nov. 14, 1944 [du Pont]. 14-358
Special Protective Coatings, Monthly Summary, Dec. 13, 1944 [du Pont]. 14-378
Monthly Summary, Special Protective Coatings, Jan. 12, 1945 [du Pont]. 14-389
Special Protective Coatings, Physical Performance Tests on Preferred Saabø System Under Simulated Service Conditions [du Pont]. 14-395
Special Protective Coatings, Monthly Summary, Feb. 14, 1945 [du Pont]. 14-403
Special Protective Coatings, Monthly Summary, March 14, 1945 [du Pont]. 14-422
Special Protective Coatings, Progress Report, June 14, 1945 [du Pont]. 14-448
Special Protective Coatings, Progress Report, Apr. 13, 1945 [du Pont]. 14-452
Special Protective Coatings, Progress Report, July 12, 1945 [du Pont]. 14-461
Special Protective Coatings—XI, Semiworks-Scale Preparation of Machine-Sprayed Film [du Pont]. 14-467
Special Protective Coatings—XIV, Formulation Studies—Replacatory Work for New Uses [du Pont]. 14-469
Special Protective Coatings—XVII, Laboratory Study of Adhesive Systems [du Pont]. 14-476

CONFIDENTIAL

ABSORBENT MATERIALS (Continued)

- Special Protective Coatings, Monthly Summary and Informal Progress Report, Aug. 13, 1945 [du Pont].* 14-491
- Special Protective Coatings, Monthly Summary and Informal Progress Report, Sept. 14, 1945 [du Pont].* 14-502
- Special Protective Coatings—XXV, Final Report [du Pont].* 14-508
- Special Protective Coatings—XXVI, Surface Adjustment of "Une B" Film [du Pont].* 14-547
- Special Protective Coatings—XXVII, Semiworks-Scale Preparation of Machine-Sprayed Film [du Pont].* 14-548
- Special Protective Coatings—XXIX, Practical Application Trials, "Une A" [du Pont].* 14-549
- Special Protective Coatings—XX, Practical Application Trials, Laboratory Study of Adhesives for "Une B and C" [du Pont].* 14-550
- Special Protective Coatings—XXI, Formulation Development Studies [du Pont].* 14-551
- Special Protective Coatings—XXII, Preparation of Film by Hot Pressing [du Pont].* 14-552
- Special Protective Coatings—XXIII, Semiworks-Scale Preparation of Machine-Sprayed Film [du Pont].* 14-553
- Special Protective Coatings—XXIV, Process Development Work at Newburgh [du Pont].* 14-554

AIRBORNE RADAR, see also Beacons, Fire Control, Guided Missiles, Landing, Navigation, and Night Fighting Components

- Final Report of Research and Development Conducted on Light Home Tube Transmitter-Receiver Units [Phileo].* 14-190
- Light weight X-Band Radar, Progress Report No. 1, July 1, 1943 [BCA].* 14-195
- AIA-1 Scanner Development Program Completion Report [Daimo Victor].* 14-199
- The AGL Receiver [GE].* 14-275
- Design and Test of Project Eagle Airfoil [Douglas].* 14-290
- Final Report on Tubes for Lightweight X-Band Radar and Ultra-Portable X-Band Beacon [RCA].* 14-415
- Final Report on H2K Roll Stabilized Scanner [Maguire Industries].* 14-429
- Handbook of Maintenance Instructions of Aircraft Radar Equipment for Army-Navy Model RT-63/APS British Model 110 DB/206 (K Band RF Head) [Sylvania].* 14-495
- Development and Production of 50 K Band RF Heads, Army-Navy Model RT-63/APS, British Model 110 DB/206 [Sylvania].* 14-496
- 2CH1A1 (AGL-1) Aircraft Fire Control Computer [GE].* 14-576
- Indicator Components as fired in a Complete Aircraft Interception Installation.* RL-138
- Tune-up Procedure for 3-Cw RF System.* RL-160
- Matching, Losses, and Frequency Sensitivity of a 3-Cw RF System.* RL-161

AIRBORNE RADAR (Continued)

- AIA Indicator.* RL-311
- ARO Range Follow-up Unit.* RL-331
- ARO Range Unit.* RL-332
- Report on Aircraft Radio Sight.* RL-374
- Airborne Radar Projects in Division 9.* RL-376
- Pictorial Brief of an Experimental AGL-1 Installation.* RL-377
- Weight Analysis of Airborne Radar Sets.* RL-450
- Modification of the Amplifier of the AN/APN-2 to Give Sharp Cut-off Wide-Band Response.* RL-613
- A Low Drag Beacon Antenna for Fighter Aircraft.* RL-685
- Stable Scanners and Unsteady Airplanes.* RL-701
- APQ-13 60-Inch Antenna.* RL-751
- Airborne Early Warning-Search Antenna.* RL-779
- K-Band Antenna for High Altitude Bombing.* RL-789
- AN/APS-31/33 R-F Unit.* RL-886
- Improved R-F System for the Transmitter-Receiver Unit of the APQ-13.* RL-905
- SN-41/APA-53 (Cudillac II Synchronizer) and IN-188/APA-53 (Cudillac II Indicator).* RL-937
- Range Follow-up Unit; Theory of Operation, Maintenance Instruction, and Parts List.* RL-M-125
- AN/APS-15 Receiver-Indicator Modified for Ground Range Sweeps and Remote Amplifier.* RL-M-172A
- Electronic Cursor for AN/APS-15.* RL-M-175
- Replacement Prearranged RF Unit for AN/APS-15A.* RL-M-216

Handbooks and Manuals

- Handbook of Maintenance Instructions for AN/APA-53 Indicator Assembly.* RL-M-243
- Manual for Operation and Maintenance of TW Audio Indicator.* RL-M-134
- Radio Set RHB, Section I—Technical Description of the Production Model Radio Set RHB. Section II—Adjustment and Alignment of Radio Set RHB.* RL-508-1
- Radio Set RHB, Section III—Glider Checkout Procedure.* RL-508-2
- Radio Set RHB, Section IV—RHB Test Equipment.* RL-508-3
- Instruction Manual for B-18 Radar Installation.* RL-M-100
- Handbook for Radar Equipment 596.* RL-M-113
- ARO System, General Description and Operational Procedure.* RL-M-125
- AN/APS-15 Schematics.* RL-M-135
- AN/APS-15 Schematics.* RL-M-135B
- Handbook of Instructions for Radio Set AN/APS-15 (H.X).* RL-M-135C
- Manual for Fighter Tail-Warning Equipment.* RL-M-138
- Handbook of Instructions for AN/APA-9 (Aspen) Radar Set.* RL-M-148A
- Handbook of Instructions for AN/APA-9 (Aspen) Radar Set. (Second Abbreviated Edition).* RL-M-148B

CONFIDENTIAL

Handbooks and Manuals (Continued)

Handbook of Instructions for Radia Set AN/APA-9 (Preproduction Sets) (Complete Edition). RL-M-148C

Falcon System Manual. RL-M-152A

AN/APG-13 Falcon System Manual. RL-M-152B

AN/APG-13 System Manual. RL-M-152C

Instruction Manual for Automatic H2X Camera Model A. RL-M-163

Temporary Instruction Manual for Automatic Radar Camera Model B. RL-M-164A

Temporary Instruction Manual for Automatic H2X Camera Model B. RL-M-164B

Maintenance Manual G for the AN/APN-7 System Modified for the SG Band. RL-M-170

Preliminary Instruction Manual for AN/APG-15. RL-M-178

Preliminary Instruction Manual for AN/APG-15. RL-M-178B

Computer Mark 14 AN/APA-30 XN-1 Instruction Manual. RL-M-179

Preliminary Technical Manual for AEW. RL-M-180A

Description of the Experimental ROSEBUD. RL-M-184

Handbook of Maintenance Instructions for AN/APA-40 (Micro-H Mark II) Airborne Attachment to AN/APS-15. RL-M-197

Preliminary Instruction Manual for X-Band Coincident Hvacu XCR (Mark I) AN/APX-14. RL-M-199

Preliminary Maintenance and Operating Instructions for AN/APX-15. RL-M-200

Theory of Operation of AEW Circuits. RL-M-201

Preliminary Instruction Manual for S-Band coincident Transponder Black Maria RT-74/APX. RL-M-211

Maintenance Manual for Model AN/APN-21NR Rucen. RL-M-213

Handbook of Maintenance Instructions for the AN/APG-8 Airborne Radar Gunsighting Equipment. RL-M-214

Preliminary Instruction Manual for AN/APG-15R. RL-M-215

Pre-flight Check of Radio Set AN/APQ-7. RL-M-219

Alignment Procedure for Cadillac Airborne Synchro System. RL-M-226

Preliminary Handbook of Operating and Maintenance Instructions for Model AN/APA-46 Aircraft Radar Equipment. RL-M-227

Preliminary Operation and Maintenance Handbook for Release Point Indicator AN/ARA-17. RL-M-241

Handbook of Maintenance Instructions for the AN/APA-53 Indicator Assembly. RL-M-243

Handbook of Maintenance Instructions for Cadillac II Power Supply. RL-M-245

Preliminary Instructions for Radar Set AN/APG-15B. RL-M-246

Nonmangle. RL-M-247

Handbooks and Manuals (Continued)

Pre-flight Check of Radio Set AN/APQ-7. RL-S-54

Operational Procedure for AN/APA-5. RL-S-67

PERFORMANCE

Maintenance Experience with ASV Equipment. RL-34

Regular Report on the X-JO-3, Oct. 1, 1941. RL-53

Regular Report on the X-JO-3, Nov. 5, 1941. RL-54

Regular Report on Navy Dirigible K-3, Nov. 5, 1941. RL-55

Regular Report on the Maintenance Group, Oct. 22, 1941. RL-60

Regular Report on the Maintenance Group, Nov. 26, 1941. RL-61

Radar Target Contrast. RL-375

Photographs of the PPI Indicator Tube with 3-Cm ASV Over Water and Land. RL-381

Photographic Polarization Tests. RL-382

Operational Report on B-24, No. 1, in the British Isles, March-June, 1942. RL-391

Altitude Return in the AN/APS-6. RL-706

Flight Behavior of the Flux Gate and Gyrocompass and Their Effects on GPI. RL-712

Flight Tests of Black I Relay Radar System. RL-727

Echoes from Tropical Rain on X-Band Airborne Radar. RL-728

An Aerial Investigation of K-Band Radar Performance under Tropical Atmospheric Conditions. RL-729

Flight Tests of AEW Black III Relay Link. RL-739

The AN/APS-32. RL-763-2

The AN/APS-33. RL-763-3

The AN/APS-34. RL-763-4

Range Accuracy of AN/APG-5 ARO. RL-820

A Final Report on AN/APS-10. RL-874

Range and Tracking Accuracy of AN/APG-15B. RL-875

Interference Measurements on the AN/APS-30 Series. RL-998

Burnighting the AN/APG-15 Antenna Assembly. RL-1009

Beacon Tests with AN/APS-6. RL-S-16

Flight Tests on AN/APS-6A. RL-S-25

AEW Bedford Trials. RL-S-32

Preliminary Report on Single Aircraft Target Ranges of AEW. RL-S-37

Waveforms, Voltage and Resistance Measurements in AN/APA-5 Indicator Equipment. RL-S-38

H2K Radar Displays. RL-S-44

AEW Tactical Tests at Frigantine. RL-S-50

PPI Photographs from AEW. RL-S-51

AN/APS-15A and AN/APS-15B Tests. RL-S-57

Mechanical and Electrical Tests of the General Electric Company Scanner for the AN/APS-10 System. RL-S-61

Supplementary Report on Aircraft Target Ranges of AEW. RL-S-65

CONFIDENTIAL

Systems and Attachments

Descriptive Technical Specification-Fighter Tail-Warning Equipment, AN/APS-13 (XA1) [RCA].

14-185

Development of a Tail-Warning Radar System, TWL-2 (AN/APS-13) [RCA].

14-236

The Sperry Stabilized Aircraft Gunlaging System, AGL-2, Intermediate Phase [Sperry].

14-280

U. S. Radar Survey, Section I, Airborne Radar [NDRC].

14-331

Final Technical Report on AGL-1 Development [GK].

14-385

Final Report on the Fairchild Central Station Computer (Part I), the Fairchild 50 Caliber M2 Computer and AGS Adaptations for an Emerson Tail Torret (Part II) [Fairchild].

14-433

Advanced Design for Radar Photography [Fairchild].

14-503

U. S. Radar Survey, Section 8, Airborne Radar, Change 1 [NDRC].

14-568

Development and Production Samples of APG (AN/APG-5 and AN/APG-8) Series Radar Equipment, including Manuscript Handbook of Maintenance Instructions for Radio Sets AN/APG-5 and AN/APG-5A [Galvin].

14-569

Final Report of Contract OEMar-1044, May 27, 1943 to October 31, 1945; Part 2, Triangle Solver for Eagle Project; Part 3, Triangle Solvers for H2X Bombing Project; Part 4, Triangle Solver for Laboratory Use; Part 5, Redesign of Triangle Solver for Eagle Project [Librascope].

14-587

B-18-A Report, February 13 to July 22, 1941. Report on XP-61 Mock-up.

RL-1

Advance Development of 3.3-Cm System.

RL-24

3-Cm System Group Report, July 5, 1941.

RL-25

Airborne 3-Cm Radar Equipment for AI and ASV Applications.

RL-27

Correlation of ASV Equipment with the Bomb-sight.

RL-35

Navy Roof, etc.

RL-39

Roof System Reports, August 26 to September 21, 1941.

RL-40

Regular Report on the X-JO-3, Oct. 1, 1941.

RL-53

Regular Report on the X-JO-3, Nov. 5, 1941.

RL-54

Regular Report on the Navy Dirigible K-3.

RL-55

Regular Report on the B-24.

RL-62

10-Cm ASV Equipment on LB 30 Airplanes.

RL-63

Regular Report on the PBM-1.

RL-64

Regular Report on the CXBH-1 (The PBM-1).

RL-65

5-Band ASV Marker.

RL-298

Survey of 10-Cm Radar Installation in Flying Boat.

RL-383

Report on the Radar System Installed on a "K" Type Airship.

RL-392

Final Report on SRR.

RL-463

Weight Analysis of Airborne Radar Sets.

RL-450

Roadbud Microwave Beacon Equipment.

RL-460

Vixen X.

RL-607

Systems and Attachments (Continued)

Black Maria. Coincident Cross-Band Transponder for S-Band Radar (AEW).

RL-072

Sea-Return Effects and Their Elimination in the AN/APS-6.

RL-707

The AN/APS-30 Series.

RL-763-0

The AN/APS-31 System.

RL-763-1

The AN/APS-32.

RL-763-2

The AN/APS-33.

RL-763-3

The AN/APS-34.

RL-763-4

AN/APS-10, a Lightweight X-Band Search Set.

RL-768

AN/APG-21.

RL-794

The AEW System, Book I, Airborne Equipment.

RL-806-1

The AEW System, Book II, Shipboard Equipment.

RL-806-2

The AEW System, Book III, Test Equipment.

RL-806-3

Design Considerations for an Improved Interception (AI) Radar; The AN/APS-21 System.

RL-868

The AN/APS-23 Antenna and Installation.

RL-878

AN/APG-5 (ARO) as a Terrain Clearance Indicator.

RL-908

Firefly Moving Vehicle Detector AN/APS-27.

RL-994

Butterfly Moving Vehicle Detector AN/APS-26.

RL-1021

AN/APS-15 Schematics.

RL-M-135

AN/APS-15 Schematics.

RL-M-135B

Manual for Fighter Tail-Warning Equipment.

RL-M-138

Preliminary Handbook of Operating and Maintenance Instructions for Model AN/APA-46 Aircraft Radar Equipment.

RL-M-227

Noisecage.

RL-M-247

General Description, Special Installation Requirements, and Mounting Dimensions of AN/APG-5 (ARO), Airborne Range Only Equipment.

RL-S-6

AN/APS-10 Airborne Radar.

RL-S-22

AEW, Airborne Early Warning Equipment.

RL-S-26

AEW, Airborne Early Warning Equipment (RL-S-26 plus additional material).

RL-S-27

Interconnecting AN/APA-5 and Armg Radar Sets.

RL-S-30

Termination Report on Radar Photo Reconnaissance Project.

RL-S-34

AMPLIDYNES see Remote Indication and Control Systems

AMPLIFIERS

Service Manual for Video Amplifier [U. of Pa.].

14-97

Development of a Tunable IF Amplifier [Sylvania].

14-399

Noise Reduction by Delayed Feed-Back [RCA].

14-146

Analysis of 6SA7 Gated Amplifier [Cornell].

14-158

Final Report on Development of (1) High-Fre-

CONFIDENTIAL

AMPLIFIERS (Continued)

- quency Video Amplifier and (2) Radar Ranging System [U. of Pa.]. RL-571
Development and Use of the "Mierskauf" Lock-In Amplifier. RL-589
Receivers. RL-161
RL-104
Visit to the Bell Telephone Laboratories. RL-105
Special Report on Receivers. RL-166
IF Amplifier Design. RL-112
Report of the Radio Frequency Section. RL-140
Fine Grid Technique. RL-299
The Radiation Laboratory S-Band Amplifier (Preliminary Report). RL-306
A 70-Mc Wide IF Amplifier. RL-307
Externally Triggered Circular-Sweep Amplifiers. RL-335
A Cathode Follower Employing Two Tubes to Obtain Extremely Low Output Resistance. RL-469
Stagger-Tuned I-F Amplifiers. RL-524
The Effect on Noise Figure of Placing the Gain Control on the First I-F Stage. RL-528
A Hard Tube Servoamplifier for Fractional Horsepower DC Motors. RL-535
Stagger-Damped Double-Tuned Circuits. RL-539
Antenna Measuring Equipment: 100-Db Linear Audio Amplifier. RL-601-3
Modification of the Amplifier of the AN/APN-2 to Give Sharp Cut-off Wide-Band Response. RL-613
The Use of a Twin-T Network in a Selective Frequency Amplifier, with Special Applications. RL-737
Grounded Grid I-F Amplifiers. RL-1030
Intermediate Frequency Amplifier Overload Characteristics. RL-1632
Memorandum Describing High Gain DC Amplifier. RL-M-110
Instructions for Operation of High Gain Video Amplifier for P4-E Synchroscope. RL-M-166
AN/APN-15 Receiver-Indicator Modified for Ground Range Sweeps and Remote Amplifier. RL-M-172A

ANTENNAS see also Radomes, Scanning

- Design of Egg Beater Scanning Antenna for the Eagle Radar Bombight and Construction of a Model, Final Report [Int. Projector Corp.]. RL-412
RFLX Antenna, Type A [RCA]. RL-396
Roof Systems Reports, Aug. 26—Sept. 21, 1941. RL-40
Regular Report on Spinners and Radiators. RL-56
Regular Report on Spinners and Radiators. RL-57
Report of Parabola Section, Dec. 2, 1940. RL-91
Report of Parabola Section, Dec. 16, 1940. RL-92
Report of Parabola Section, Jan. 22, 1941. RL-93
Antenna Group, Feb. 14, 1941. RL-94
Report of the Antenna Group, Mar. 12, 1941. RL-95
Report of the Antenna Group, May 1, 1941. RL-96
Report of the Antenna Group, July 1, 1941. RL-97
Antenna Design and Pattern. RL-98
A Study of Fanned Beam Radiators. RL-99

ANTENNAS (Continued)

- Theory of Radiation from Paraboloidal Reflectors. RL-114
Notes on Antenna Design. RL-123
A Method for Measuring the Absolute Gain of Microwave Antennas. RL-168
Rear Rectangular-Guide Antenna Feed. RL-109
Illumination and Phases of Antenna Feeds. RL-176
Round-Guide Rear Antenna Feeds. RL-171
Effect of Paraboloid Size and Shape on Beam Patterns. RL-258
Graphical Analysis of Beam Patterns from Paraboloid Reflectors. RL-259
Pillbox Antenna for Glide Path. RL-260
Some Matching Properties of Antenna Feeds. RL-261
3-Cm Bolometer Detector Suitable for Field Measurements (Type Y). RL-262
Horizontally Polarized 9.1-Cm Conical-Horn Receiving Antenna. RL-263
Rapid Scanning, High Resolution Antennas Preliminary Report. RL-265
An Automatic Recorder for Microwave Antenna Pattern Measurements. RL-266
45° Microwave Reflector. RL-267
Gratings and Screens as Microwave Reflectors. RL-268
Information of Standard Radiation Laboratory Paraboloid Reflectors. RL-269
Antenna Feeds for $\frac{1}{8}$ -Inch Stub-Supported Coaxial Line. RL-271
Synthesis of Microwave Diffraction Patterns with Application to Cas's Patterns. RL-272
Double Dipole Rectangular Waveguide Antennas. RL-273
Antenna Feeds from $\frac{1}{8}$ -Inch Coaxial Line. RL-274
The Antenna Slide Rule—Series L. RL-276
Microwave Linear Radiators. RL-366
Laboratory and Field Tests with Stabilized Spinners. RL-395
Development of Antenna for Raytheon SO-CXBY. RL-396
Antenna for High-Altitude Bombing (H2X). RL-411
Report on the Microwave Antenna Conference, July 19-23, 1943. RL-414
LEASV (AN/APA-2) Antenna. RL-415
Half Recone Antenna. RL-419
Contribution of the Dish to the Impedance of an Antenna. RL-442
Probe-Fed Slots as Radiation Elements in Linear Arrays. RL-455
Antenna Pattern and Measuring Equipment. RL-472
Paraboloid Antenna Characteristics as a Function of Feed Tilt. RL-479
A Simplified Search Antenna for Radio Set AN/MPN-1. RL-480
X-Band Horizontally Polarized Nondirectional Antennas. RL-489
V-Beam G.C. Radar. RL-567
Adjustment of Loran Antennas and Antenna Coupling Units at Frequencies Between 1,700 and 2,000 Kilocycles. RL-511

CONFIDENTIAL

ANTENNAS (Continued)

- Impedance Characteristics and Equivalent Circuits for Vertical Radiators.* RL-512
S-Band Horizontally Polarized Nondirectional Antennas. RL-517
Aspen Airborne Antenna. RL-519
Rotating Corrugated Eccentric Line Antennas. RL-531
Leaky Waveguide Rapid Scanner. RL-557
S-Band End-Fire Array Antenna. RL-577
Antenna Measuring Equipment. RL-601-1
Antenna Measuring Equipment, High Power CW Transmitter for S-Band. RL-601-2
Antenna Measuring Equipment, 100-Db Linear Audio Amplifier. RL-601-3
Antenna Measuring Equipment, Automatic Antenna Pattern Recorder. RL-601-4
Low-Altitude Navigation Antennas Developed in Connection with AN/APS-10. RL-615
S-Band Vertically Polarized Nondirectional Antennas. RL-623
K-Band Cosc² Antennas with a Line Source and Shaped Cylindrical Reflector. RL-624
Field Station for Antenna Measurements. RL-632
Vertical Coverage of a 1½-Ft by 5-Ft Antenna Designed for SG-3 (Experimental Data Obtained with an SNB Aircraft as Target). RL-636
SG-1 Antenna Mark 2. RL-639
Parallel Plate Optics for Electrical Scanning. RL-646
Electrical Design of the AN/TPS-10 Antenna. RL-648
Shaping the Primary Pattern of a Horn Feed. RL-655
Characteristics of Horn Feeds on Rectangular Waveguide. RL-656
SU-2 Antenna, Shipborne Stabilized Radar Antenna for Sea Search. RL-659
SU-2 Antenna, Line-of-Sight Stabilization of a Radar Beam by Reflector Tilt. RL-660
Reflections from Smooth Curved Surfaces. RL-661
Stabilized SG-3 Antenna. RL-665
Information on Radiation Laboratory Paraboloid Reflectors. RL-679
A Low-Drag Beacon Antenna for Fighter Aircraft. RL-685
Primary Feeds in Cylindrical Paraboloids. RL-686
The SCI Rapid Scan Height-Finding Antenna. RL-688
Horn Feeds for Parabolic Antennas. RL-690
Double-Curvature Surfaces for Beam Shaping with Point-Source Feeds. RL-691
Double Coaxial Coupler for RUPX Antenna. RL-736
Calculation of Vertical Polar Diagrams and Power Gains of Antennas for Airborne Navigational Radars. RL-750
APQ-13 60-Inch Antenna. RL-751
Parallel Plate Beams. RL-760
Fourier Integral Methods of Analysis. RL-762-1
Quarter Wave Plate for Broad-Band Circular Polarization. RL-769
Broad-Band Coaxial-Line Horn. RL-770

ANTENNAS (Continued)

- K-Band Linear Array.* RL-771
Slotted Dipole Impedance Theory. RL-772
Double Reflector Antenna for High-Altitude Bombing. RL-775
Airborne Early Warning Search Antenna. RL-779
Mechanical Resonant Scanner. RL-782
K-Band Antenna for High-Altitude Bombing. RL-789
Present Status of High Power at S-Band. RL-793
Shipboard Black Maria Antennas. RL-796
AN/APS-32 and AN/APS-34 Airborne Navigational Radar Antennas at K-Band. RL-808
Analysis and Correction of the Impedance Mismatch Due to a Reflector. RL-810
Hawkeye Antenna. RL-812
S₂ 6-6 Horizontally Polarized Antenna. RL-823
Die-Cast Model of the CSB Antenna. RL-824
Buzz-Bomb Antennas. RL-825
Variable Width Waveguide Scanners for Eagle (AN/APQ-7) and GCA (AN/MPN-1). RL-840
IFF Antenna for Mounting on the Wing of a TBM Torpedo Bomber. RL-842
IFF Receiving Antenna for Mounting in Cadillac Dish. RL-843
IFF Transmitting Antenna for Mounting in Cadillac Dish. RL-844
Six-Element Vertically Polarized Beacon Antennas. RL-846
The AN/APQ-13 (60") Scanner in B-29 Airplanes. RL-848
Cindy Antenna, A High Resolution K-Band Radar Antenna for Sea Search. RL-849
Broad Band Bi-Conical Vertically Polarized Dipole. RL-851
Double Skin-Back Antenna. RL-852
APS-33 Antenna, Final Pre-Production Data. RL-861
A Nric Pillbox Feed. RL-862
Horn with Metal Lens. RL-863
Airborne Black Maria Antenna. RL-866
Lens Feed for K-Band Pillboxes. RL-869
Streamlined Microwave Omni-Directional Antennas. RL-871
The AN/APS-33 Antenna and Installation. RL-878
A Four Horn Feed to Give Cus² Antenna Patterns. RL-896
An IFF Mark 5/UNB Feed in the SCI Search Antenna. RL-897
AN IFF Mark 5/UNB Feed in the AN/CPS-6 Vertical Antenna. RL-898
AN IFF Mark 5/UNB Radiator in the AEW Antenna. RL-899
A Broad Band TEM Pillbox. RL-901
A Flat Plate Beam-Shaping Antenna. RL-903
AN/CPS-6 (V-Beam) Antenna. RL-951
Compart Horns Intermediate Between Polyrods and Reflectors. RL-961
Measurement of Phase in Microwave Antenna Fields by Phase Modulation Method. RL-966
Dielectric Rod Endfire Antennas Close to Metal Surfaces. RL-969

CONFIDENTIAL

ANTENNAS (Continued)

- Linear Array for Use in the AN/APS-23 Antenna, RL-973
 Two Circularly Polarized S-Band Horns, RL-980
 An X-Band Hemi-Isotropic Radiator, RL-981
 Omnidirectional Antennas for BUPX, RL-996
 Dipole Arrays Backed by Reflecting Sheets, RL-1014
 SCI Search Antenna Mark I, RL-1025
 SCI Search Antenna Mark II, RL-1026
 The Bovertail (AN/CPS-4) Antenna, RL-1027
 SG-1 Mock III Antenna, RL-1044
 The Antenna for Radar Mark 35, RL-1045
 AN/APS-31 Antenna, RL-1068
 Beam Shaping, RL-1069
 Metal Plate Lens for Cas² Antenna, RL-1070
 Low Altitude Cas² Antenna for APS-33 Project, RL-1073
 Survey of Poster Scanner Developments, RL-1074
 The Alteration in the Radiated Field of a Paraboloid Due to a Shift in the Position of the Dipole Feed, RL-1078
 Admittance Characteristics of Some S-Band Waveguide Fed Dipoles, RL-1082
 Preliminary Technical Manual for SCR-584 MTI Modification Kit No. MC-642-AS and Fan-Beam Search Antenna, RL-M-216
 Preliminary Testing of the Honata Corporation AN/APS-10 Scanner, RL-S-33
 Proposed Antenna for Panoramic Radar, RL-S-55
 Tables of Fourier Transforms of Fourier Series, Power Series, and Polynomials, RL-S-58
 Antenna Catalogue, RL-S-64
 Paraboloid Diffraction Patterns from the Standpoint of Physical Optics, RL-T-7
 General Lecture Series on Radar Components, RL-T-18
 Flight Test of an Experimental Horn-Fed Antenna for H2N, [Div. 14-234.21-M8.]

ANTI-JAMMING, see Countermeasures

ATR SWITCHES, see TR and ATR Switches

ATTENUATORS, see Test Equipment and Transmission Line Components

AUTOMATIC FREQUENCY CONTROL

- An Automatic Frequency Control and Frequency Selection System for Magnetrons, RL-641
 Some Automatic Frequency Control Circuits, RL-687
 Automatic Frequency Control for AN/APS-31/34, RL-887
 Automatic Frequency Control of Thermally-Tuned, Beacon Local Oscillator, RL-955
 Video Discriminator Automatic Frequency Control, RL-957
 A Method for Automatic Frequency Control of Thermally-Tuned Oscillators, RL-959
 An Automatic Frequency Control System for Magnetrons with Beacon Applications, RL-1020
 AFC Operation and Maintenance, RL-S-77

BALLISTICS, see Bombing and Ballistics

BEACONS

- BUPX Antenna, Type A [RCA], 14-396

BEACONS (Continued)

- Final Report on Ultra-Portable Beacon (BUPX) [RCA], 14-407
 Final Report on Tubes for Lightweight X-Band Radar and Ultra-Portable X-Band Beacon [RCA], 14-415
 Development Work on AN/PPN-2 Radio Set [Galvin], 14-434
 Beacon Discrimination Circuit, RL-29
 Performance Characteristics of the Magnetron Under Conditions Simulating Beacon Operation, Tube Types 2J48 and 2J42, RL-227
 Horizontally Polarized 9.1-Cm Biconical Horn Beacon Antenna, RL-263
 A Beacon Prospectus with a Pictorial Brief of BGS, RL-357
 HGS 10-Cm Radar Beacon, RL-358
 Half Beacon Antenna, RL-419
 Rosebud Microwave Beacon Equipment, RL-460
 Propagation over Short Paths and Rough Terrain at 200 Mc/s, RL-468
 Overinterrogation Control of Microwave Beacons, RL-477
 X-Band Horizontally Polarized Non-directional Antennas, RL-489
 Results of Tests on Use of Rebecca-Eureka by the Army Ground Forces, RL-500
 Pulse-Length Discrimination in Beacons, RL-510
 S-Band Horizontally Polarized Nondirectional Antennas, RL-517
 Tests of Beacon Receiver on Y-Beam, RL-522
 An Airborne S-Band Beacon for Rooster Operation, RL-554
 Ultra-Portable Microwave Radar Beacons as Beacon Approach Aids in Aircraft Landing, RL-581
 BUPX (AN/UPN-1, 2) an Ultra-Portable S-Band Radar Beacon and Its Tactical Uses, RL-583
 Siting and Range of Microwave Beacons, RL-590
 Results of Field Tests on AN/UPN-1, 2 (Experimental Models of BUPX) at Boca Raton, Florida (January-March 1944), RL-591
 Florida Tests on ROSEBUPX against SCR-582, SCR-615, MEW, RL-596
 Statistics of Beacon Interrogation, RL-602
 Video Stretching as a Method for Improving X-Band Beacon Reception, RL-604
 Comparison of Theoretical and Experimental Requirements for Microwave Beacon Transmitter Power and Receiver Sensitivity, RL-627
 A Low-Drag Beacon Antenna for Fighter Aircraft, RL-685
 BUPX (AN/UPN-3.4, AN/APN-11) Ultra-Portable X-Band Radar Beacons and Their Tactical Uses, RL-710
 Front-Line Demarcation and Bombing with the Aid of Light-Weight X-Band Beacons (BUPX), A Log of Tactical Tests, October 1944-February 1945, RL-713
 Micro-II, RL-714
 Double Coaxial Coupler for BUPX Antenna, RL-736

CONFIDENTIAL

BEACONS (Continued)

- Interference Between SCR-584's Tracking APN-19 Beacons.* RL-816
Final Report on BUPX. RL-1054
Preliminary Handbook for Experimental Prototype Model Radio Set SCR-620, March 1943, Supplement (dated July 1, 1943). RL-M-121
Handbook for Model CXEH (BGX) Radar Beacon. RL-M-129
Preliminary Manual for Radar Beacon Type BPS (Prototype of AN/CPN-8) Similar in Function and Components to SCR-620. RL-M-130
Handbook of Instructions for AN/APA-9 (Aspen) Radar Set. RL-M-148A
Handbook of Instructions for AN/APA-9 (Aspen) Radar Set, (Second Abbreviated Edition). RL-M-148B
Handbook of Instructions for Radio Set AN/APA-9 (Preproduction Sets), (Complete Edition). RL-M-148C
Preliminary Handbook for Experimental Prototype Model Radio Set SCR-620 (Same as RL-M-121), March 1943, Supplement, July 1, 1943. RL-M-161
Radar Beacon—Mark I Mod 1. RL-M-167
Maintenance Manual for the AN/APQ-7 System Modified for the S₀ Band. RL-M-170
Description of the Experimental Beacon. RL-M-184
Preliminary Instruction Book for Shore Bombardment Beacon Navy Model Mark 2 Mod 0 and Mod 1. RL-M-185
Handbook of Maintenance Instructions for AN/APA-40 (Micro-H Mark II) Airborne Attachment to AN/APS-15. RL-M-197
Preliminary Instruction Manual for X-Band Coincident Beacon XCB (Mark I), AN/APX-14. RL-M-199
Maintenance Manual for Model AN/APN-21XR Beacon. RL-M-213
Target Buft Transponder. RL-S-2
Beacon Tests with AN/APS-6. RL-S-16

BOMBING AND BALLISTICS

- Final Report for Contract OEMar-1044, May 27, 1943 to Oct. 31, 1945; Part 2, Triangle Solver for Eagle Project; Part 3, Triangle Solver for H2X Bombing Project; Part 4, Triangle Solver for Laboratory Use; Part 5, Redesign of Triangle Solver for Eagle Project [Libroscope].* 14-537
Correlation of ASV Equipment with the Bombsight. RL-35
Calibrator for Low Altitude Bombing Equipment. RL-336
H2X Rouge Unit for Navigation and Bombing. RL-342
Modified Homing Course. RL-369
Antenna for High-Altitude Bombing (H2X). RL-411
Bombing Errors. RL-530
An H + B Impact Predicting Computer Assuming Constant Indicated Airspeed for Use with AN/APS-15A Radar. RL-584
The SCR-584 Plotting Table System. RL-595

BOMBING AND BALLISTICS (Continued)

- Nomograms for Radar Bombing with the 100-Lb Practice Bomb M38A2.* RL-614
BUPX (AN/UPN-3-4, AN/APN-11) Ultra-Portable X-Band Radar Beacons and Their Tactical Uses. RL-710
Front-Line Demurement and Bombing with the Aid of Light-Weight X-Band Beacons (BUPX), A Log of Tactical Tests, October 1944—February 1945. RL-713
Micro-H. RL-714
The AN/APS-30 Series. RL-763-0
The AN/APS-30 Series. RL-763-1
Double Reflector Antenna for High-Altitude Bombing. RL-775
GPI for Close-Control Bombing. RL-783
K-Band Antenna for High-Altitude Bombing AN/APQ-34. RL-789
A Photographic Method for Assessment of Bombing Results. RL-939
Handbook of Instructions for AN/APA-9 (Aspen) Radar Set. RL-M-148A
Handbook of Instructions for AN/APA-9 (Aspen) Radar Set, (Second Abbreviated Edition). RL-M-148B
Handbook of Instructions for Radio Set AN/APA-9 (Preproduction Sets), (Complete Edition). RL-M-148C
Modification of SCR-584 for Oboc H. RL-M-151
Instruction Manual for Automatic H2X Camera Model A. RL-M-163
Temporary Instruction Manual for Automatic Radar Camera Model B. RL-M-164A
Temporary Instruction Manual for Automatic H2X Camera Model B. RL-M-164B
Naumangle. RL-M-247
Ground Position Indicator for Radar Navigation and Bombing. RL-S-19
Interconnecting AN/APA-5 and Army Radar Sets. RL-S-30
Release Point Indicator Used in Conjunction with RC-294. RL-S-47
Radar Bombing Techniques. RL-S-59
Tables for Use with Torpedo Director Mark 33-1. RL-S-60
The Manual Plotting System RC-305. RL-S-62
 BROAD-BANDING, see reports on Components under Transmission Lines, TR, etc.
 CABLES AND CONNECTORS, see Transmission Lines
 CALIBRATORS, see Test Equipment, Range
 CAMOUFLAGE, see Absorbent Materials, Countermeasures
 CATHODE-RAY TUBES, see also Indicators
Report of Work on Duplex Screen Tubes During 1941, OSRD 841 [GE]. 14-96
Summary of Research on Radar Indicator Screens, OSRD 891 [RCA]. 14-103
Work on Slow Phosphors for Radar Indicator Screens, OSRD 890 [GE]. 14-104
Theory of Dark-Trace Tubes, I [Carnegie Inst. of Tech.]. 14-131

CONFIDENTIAL

CATHODE RAY TUBES (Continued)

- Abridged Report on Circuits for Improving Focus on Electrostatic Cathode-Ray Tubes under Conditions of Intensity and Deflection Modulation* [Brown]. 14-132
- Report of Progress of Work on Dark-Trace Tubes* [GE]. 14-147
- The Theory of Dark-Trace Tubes, II* [Carnegie Inst. of Tech.]. 14-172
- Darkening and Bleaching of KCL* [Carnegie Inst. of Tech.]. 14-177
- Two Notes on the Potentials Developed in Cathode-Ray Screens During Bombardment* [Carnegie Inst. of Tech.]. 14-178
- Memorandum on the May 1943 Meeting on Dark Trace Tubes of Radiation Laboratory* [Carnegie Inst. of Tech.]. 14-183
- A Memorandum on the Scattering of Light by DT Screens* [Carnegie Inst. of Tech.]. 14-198
- Darkening and Bleaching of KCL, II, The Effect of Temperature* [Carnegie Inst. of Tech.]. 14-205
- Memorandum Upon the Behaviour of DT Screens Containing Magnesium* [Carnegie Inst. of Tech.]. 14-214
- Dark-Trace Radar Indicator Screens, Progress Report No. 2, Feb. 18, 1944* [RCA]. 14-249
- Experiments with Double Layer DT Screens* [Carnegie Inst. of Tech.]. 14-253
- The Theory of Dark-Trace Tubes, III* [Carnegie Inst. of Tech.]. 14-257
- The Depth of the Darkened Region and the Build-Up of Darkening and Persistent Trace in KCL Screens* [Carnegie Inst. of Tech.]. 14-258
- Theory of Dark-Trace Tubes, IV* [Carnegie Inst. of Tech.]. 14-265
- The Spectral Distribution of the Luminescence of Red Screen Materials* [DuMont Labs.]. 14-269
- Aging of KCL Crystals and Screens Under Electron Bombardment* [Carnegie Inst. of Tech.]. 14-302
- The Properties of Evaporated Layers of Potassium Chloride Containing Small Additions of Metallic Elements When Subjected to Electron Bombardment* [Carnegie Inst. of Tech.]. 14-326
- Skiatron Projection Cathode-Ray Tubes with Dark-Trace P10 Screens* [RCA]. 14-369
- Cathode Ray Tube Detectors* [Brown]. 14-376
- Preparation of Exponential Decay Powders and Screens $ZnF_2:Mn$, $ZnMgF_2:Mn$ and $MgSiO_3:Mn$* [Sylvania]. 14-379
- Development of the Skiatron Cathode Ray Tube for Projection Indicator, Progress Report No. 4* [RCA]. 14-492
- Research and Development Leading to New and Improved Radar Indicators, Text and Figures, Final Report* [RCA]. 14-498
- Cathode-Ray Screen Tube Development* [DuMont.]. 14-509
- Investigations to Prepare a Transparent Phosphor, Final Report* [Carnegie Inst. of Washington]. 14-572

CATHODE RAY TUBES (Continued)

- Method of Measurement and Some Performance Characteristics of P14 Screens, with a Note on Manufacturer's Specifications for Tubes Containing P14 Screens* [RCA]. 14-586
- Studies of British Phosphors of the Type C, H, K, and M.* RL-405
- Potentiometer Type RL-B for Azimuth and Elevation Indication on Magnetically Deflected Cathode-Ray Tubes.* RL-409
- Stabilized High Voltage Supply.* RL-565
- Performance Characteristics of Army-Navy Preferred Type Electrostatic Cathode-Ray Tubes.* RL-588
- Deflection Yoke Design Information.* RL-674
- High Speed Photography of Cathode Ray Tube.* RL-699
- A/R Range Scope.* RL-755
- Notes on Photometry, Colorimetry, and an Explanation of the Centilux Scale.* RL-804
- Instruction Manual for Projection PPI.* RL-M-137
- Testing of Skiatrons.* RL-S-1
- Testing of Skiatrons (Supplement).* RL-S-1a
- Comparison of P7 Screen Test Methods.* RL-S-9
- Focus Coil Control for Cathode-Ray Tubes.* RL-S-17
- Tabulation of CRT Screen Properties.* RL-S-48
- Evaluation of Specifications for P14 CRT Screens.* RL-S-71
- General Lecture Series on Radar Components.* RL-T-18

CATHODES

- Magnetron Cathode Studies, Progress Report, May 1, 1943* [Bartol]. 14-148
- Knarled Type Cathode-Construction and Life Test* [CRL.]. 14-149
- Magnetron Cathode Studies, Progress Report, July 1, 1943* [Bartol]. 14-169
- Magnetron Cathode Studies, Progress Report, Sept. 1, 1943* [Bartol]. 14-187
- Magnetron Cathode Studies, Progress Report, Nov. 1, 1943* [Bartol]. 14-209
- Magnetron Cathode Studies, Progress Report, Jan. 1, 1944* [Bartol]. 14-251
- Cathode Sparking, Effect of Superimposed D.C. and Role of Coating Resistance* [Bartol]. 14-295
- Sparking of Oxide-Coated Cathodes* [Bartol.]. 14-296
- Back-Bombardment of Magnetron Cathodes* [Bartol.]. 14-309
- Secondary Electron Emission from Oxide-Coated Magnetron Cathodes* [Bartol.]. 14-310
- Cathode Coating Resistance as Measured by Embedded Probes* [Bartol.]. 14-514
- Secondary Electron Emission from Oxide-Coated Cathodes* [Bartol.]. 14-515
- Sparking Phenomena in High Vacuum Thermionic Tubes, General Survey* [Bartol] 14-516
- Sintered Thoria Cathodes* [Bartol.]. 14-517
- Effect of Particle Size* [Bartol.]. 14-518
- Purification of Barium and Strontium Carbonates* [Bartol.]. 14-519

CONFIDENTIAL

CATHODES (Continued)

- A Note on Nitrocellulose Binders [Bartol]. 14-520
 Magnetron Cathode Studies, Final Report [Bartol]. 14-545
 Effects of Variation of Vane Width and Cathode Size on the Operation of Magnetrons. RL-586
 Cathodes for Pulsed Magnetrons. Part I—Correlations between Oscillating and Diode Conditions. RL-609
 Cathodes for Pulsed Magnetrons. Part II—Construction and Performance of Pulsed Cathodes. RL-683
 Memorandum on the Activation of Various Surfaces by Evaporation from a Heated Oxide Cathode. RL-718
 Metallic Hydride Studies. RL-813
 Alkaline Earth Oxide Cathodes for Pulsed Tubes. RL-933

CAVITIES, see also Test Equipment, TR and ATR Switches

- Perturbation Theory for Cavities [Cornell]. 14-117
 Special Report on Tunable Cavities. RL-143
 Forced Oscillations in Cavity Resonators. RL-188
 Excitation of Cavities through Windows. RL-202
 Theory of Obstacles in Resonant Cavities and Wave Guides. RL-205
 The Resonant Echo Box. RL-277
 Committee on Centimeter Receiving Tubes and Resonators. RL-286
 A Treatment of Echo Box Problems by Lagrangian Procedures, Part I. RL-629
 Theory of Ringing Time of Tunable Echo Box. RL-630
 Design of an Improved X-Band Echo Box. RL-631
 A Treatment of Echo Box Problems by Lagrangian Procedures, Part II. RL-696
 X-Band Beacon Reference Cavities. RL-972
 X-Band Standard Cavities. RL-S-70
 General Lecture Series on Radar Components. RL-T-18

CHEMISTRY, see Absorbent Materials, Crystals, and Dielectrics

CIC, see Fire Control

CIRCUIT ELEMENTS

- Mechanical Vacuum Switches, Transmission Line and RC Pulsing Circuits [U. of Cal.]. 14-156
 Preliminary Results on Calibration of Autotransformers [Cornell]. 14-364
 Measurement and Design of D. C. Resonant Charging Chokes. RL-215
 High-Frequency Characteristics of Resistors. RL-520
 Moisture-Proofing of Button Micro Capacitors. RL-790

CIRCUITS AND NETWORKS

- Development of a Stable Non-Crystal Controlled Oscillator [U. of Colo.]. 14-98
 Operating Characteristics of Multivibrators and Gates, Progress Report No. 1, Jan. 6, 1943. [Rensselaer Polytech.]. 14-154

CIRCUITS AND NETWORKS (Continued)

- Operating Characteristics of Multivibrators and Gates and Related Matters, Progress Report No. 2, June 1, 1943 [Rensselaer Polytech.]. 14-155
 Analysis of 6SA7 Gated Amplifier [Cornell]. 14-158
 Analysis of Double Triode Integrator [Cornell]. 14-159
 Range Tracking Circuit with Position Memory [Cornell]. 14-160
 Range Tracking Circuit with Velocity Memory [Cornell]. 14-161
 Coordinate Transformation Circuits Using Resolvers and Coordinate Transformation by Means of Electric Networks [Bartol]. 14-288
 Instantaneous Voltage Measurement by Use of a Trigger Circuit, Final Technical Report [Kansas State College]. 14-409
 Electronic Computers for Division, Multiplication, Squaring, etc. (VAC-4) [Cornell]. 14-435
 A Mechanical Integrating System Incorporating a Magnetic Amplifier (MA-2) [Cornell]. 14-436
 Use of a Specially Designed Magnetic Amplifier in Computing Circuits [Cornell]. 14-437
 Performance and Stability of Triggered Gates. [Rensselaer Polytech.]. 14-445
 D. C. Resolvers (DCR-2) [Cornell]. 14-512
 A. C. Potential Equalizers and Phase Sensitive Detectors (ACE-2) [Cornell]. 14-513
 Electronic Computers for Division, Multiplication, etc., Some Additional Remarks [Cornell]. 14-538
 Investigation of Circuits of Use in Precision Radar Computers, Final Report [Cornell]. 14-546
 Development of High-Frequency Video Amplifier and Radar Ringing System, Final Report [U. of Pa.]. 14-571
 Beacon Discrimination Circuit. RL-29
 Thyatron Sereo Control Circuit for Spinners. RL-31
 Special Report on Buffered Multiple Phase Box. RL-44
 Instruction Manual Browning Type A Synchronizer. RL-74
 I.F. Amplifier Design. RL-112
 Statistics of Circuit Noise. RL-192
 Analysis of Magnetron Performance, Part I, Equivalent Circuit, Method, Applications. RL-229
 Impulse and Square-Pulse Response of Various Filters. RL-285
 Precision Timing Calibrator and Range Measuring System. RL-319
 Precision Delay Multivibrator for Range Measurement. RL-320
 Medium Precision Self-Synchronous Range Circuit Model 4. RL-321
 Circular Sweep Precision Range System Model 4. RL-322
 Medium Precision Self-Synchronous Automatic Range-Tracking Circuit. RL-323
 Photoelectric Automatic Range-Tracking Unit. RL-324
 Simplified Circular-Sweep Range System. RL-325

CONFIDENTIAL

CIRCUITS AND NETWORKS (Continued)

Hand Radar Ranging Circuit. RL-327
 Antiaircraft Artillery Board Test on the Simplified Circular Sweep Range. RL-326
 Errors in Circular Sweeps Due to Decentering and Ellipticity of the Circle. RL-328
 Frequency Division with Blocking Oscillator Pulse Transformers. RL-329
 Line Controlled Blocking Oscillator Marker Generator (ARO) Calibrator. RL-330
 ARO Range Follow-up Unit. RL-331
 ARO Range Unit. RL-332
 Model H Calibrator. RL-333
 A Voltage Compensated Delay Multivibrator. RL-334
 Externally Triggered Circular-Sweep Amplifiers. RL-335
 Delayed Sweep for SCR-582-X. RL-337
 An Adaptation of the Phantatron Delay Multivibrator Circuit to the 6SA7 Tube. RL-338
 A Condenser Phase Shifter Range Circuit with Sine Wave Tracking Suitable for Microwaves Height-Finding Stations. RL-339
 Resistance-Capacitance Networks. RL-379
 A Note on Pulse Distortion by Rejection Filters. RL-422
 A One-Tube, One-Solayn Sector-Sennuer. RL-448
 Differential to Single Ended Potential Converters. RL-457
 A Cathode Follower Employing Two Tubes to Obtain Extremely Low Output Resistance. RL-469
 Overinterrogation Control of Microwaves Beacons. RL-477
 Remote-Position Control by Direct Frequency Variation. RL-482
 The Two-Disc D-C Thermistor Bridge Circuit. RL-502
 A Method for Relay Radar PPI Synchronization. RL-505
 Pulse-Length Discrimination in Beacons. RL-510
 Proposed Method for Measuring Instantaneous Magnetron Input Impedance with the Aid of a Delay Network. RL-515
 Voltage Pulse Rate-of-Rise Measurements. RL-523
 Thyrite Bridge Controlled Voltage Regulator. RL-525
 Stagger-Damped Double-Tuned Circuits. RL-539
 Frequency Division with Blocking Oscillators, Part I. RL-544
 The Evaluation of an Equivalent Circuit for a Pulse Transformer. RL-545
 Equalized Delay Lines. RL-550
 A 60-Mc Parallel Sehering Bridge. RL-558
 N Gate Attachment for SCR-584. RL-566
 Muteing Resistance Curves by Means of Two Linear Ganged Potentiometers and a Three-Terminal Resistance Network. RL-610
 Effects of Line and Cathode-Follower Terminations on Pulse Shape. RL-616
 A Method of Virtual Displacements for Electrical Systems with Applications to Pulse Transformers. RL-618

CIRCUITS AND NETWORKS (Continued)

An Extension of Lagrange's Equations to Electromagnetic Field Problems, Equivalent Networks. RL-626
 Errors in the Condenser Type Continuous-Phase Shifter. RL-633
 Realizability of Filters. RL-637
 H-3 Trigger Unit. RL-645-3
 The I-3 Signal Unit. RL-645-4
 The H-2 Trigger Unit. RL-645-6
 I-2 Signal Unit. RL-645-7
 A Microwave Frequency Discriminator. RL-662
 A Feedback Circuit for Measuring Output Noise Ratio of Crystal Rectifiers. RL-667
 Colloquium on Pulse-Forming Networks, October 12, 1944. RL-692
 Calculation of Pulse-Forming Networks Having Slow Rates of Voltage Rise. RL-698
 Nonlinear Networks as Voltage Regulators. RL-711
 Notes on Load Effects in Reflex Oscillators. RL-717
 A Theory of a Supersonic Delay Line. RL-733
 Equivalent Network for the 232-BW Pulse Transformer Based on the Method of Virtual Displacements. RL-734
 The Use of a Twin-T Network in a Selective-Frequency Amplifier with Special Applications. RL-737
 A Wide-Excursion Frequency-Modulated Alignment Oscillator or Wobulator. RL-738
 Interference Blunker. RL-749
 The Double-Tuned Circuit with Transitional Coupling. RL-784
 Electrical and Physical Characteristics of Some Commercial Feed-Through Filters. RL-785
 Multiple Reflection Delay Tank. RL-791
 On the Theory and Performance of Liquid-Delay Lines. RL-792
 Pulsed Quartz-Crystal Oscillator. RL-803
 Parallel T Stabilizing Networks for AC Servos. RL-811
 Analysis of a Half-Wave Rectifier Circuit Involving Inductance, Resistance, and Capacitance. RL-867
 Pulse-Forming Network Committee, Proposed Basic Specifications for Pulse-Forming Networks. RL-883
 The Effect of Small Changes in Circuit Parameters on the Solution of Network Problems. RL-1063
 Theory of Operation of AFW Circuits. RL-M-201
 Rectifier Filter Circuit Analysis. RL-T-3
 Rectifier Filter Circuit Analysis, Supplement. RL-T-12
 CLOSE CONTROL AND CLOSE SUPPORT, see also Ground Radar and Airborne Radar
 Tactical Devices Based on Superposition of a Plotting Board on the PPI Pattern. RL-387
 The SCR-584 Plotting Table System. RL-595
 Close Cooperation Bombing. RL-750
 Interference Between SCR-584's Tracking APN-19 Beacons. RL-816
 X-Band Sea-Return Measurements. RL-870

CONFIDENTIAL

CLOSE CONTROL AND CLOSE SUPPORT (Continued)

- Preliminary Instructions on Modification Kit MC-627 for Radio Set SCR-584.* RL-M-220
Preliminary Instructions on Modification Kit MC-627 for Radio Set SCR-584 (Revised). RL-M-220B
AN/CPA-7 Operations Room Equipment Supplementing Radio Set AN/CPS-1. RL-M-228
MEW Close Control. RL-S-76

CLUTTER, see also Moving Target Indication

- The Detection of Moving Targets among Ground Clutter by Coherent Pulse Methods.* RL-480
Tests of Beacon Receiver on V-Beams. RL-522
Elimination of Ground Clutter. RL-526
A Moving Target Selector Using Deflection Modulation on a Storage Monocycle. RL-562
The Effect of Clutter Fluctuations on MTI. RL-700
Sea-Return Effects and Their Elimination in the AN/APS-6. RL-707
MTI for MEW. RL-752
A Theoretical and Experimental Study of Radar Ground Return. RL-1024
Flight Tests on AN/APS-6A. RL-S-25
Anti-Clutter Circuits for ARW. RL-S-52

COAXIAL LINES, see Transmission Lines

COMBAT INFORMATION CENTER [CIC] see Fire Control COMMUNICATION (except for Systems), see also Relay Radar

- Radiotelephone Communication on 3,000 Megacycles [Washington State College].* 14-152
Report of Radio Relaying of Radar Signals [RCA]. 14-243
A Duplex Communication System for Microwaves. RL-830
Handbook of Maintenance Instructions for AN/AIC-6 Intercommunication System. RL-M-244

COMPUTING DEVICES AND METHODS

- Coordinate Transformation Circuits Using Resolvers and Coordinate Transformation by Means of Electrical Networks [Bartol].* 14-288
Apparatus for the Transformation of Rectangular Coordinates Using Armazorsolvers [Bartol]. 14-293
Device for Determination of the Vertical by Means of Cosmic Rays [Cornell]. 14-363
Special Mechanical Counter for the Mark III or Phase-Shift Loran Indicator [Int. Business Machines Corp.]. 14-368
Electronic Computers for Division, Multiplication, Squaring, etc., (VAC-4) [Cornell]. 14-435
A Mechanical Integrating System Incorporating a Magnetic Amplifier (MA-2) [Cornell]. 14-436
Use of a Specially Designed Magnetic Amplifier in Computing Circuits [Cornell]. 14-437
Electronic Computers for Division, Multiplication, etc., Some Additional Remarks [Cornell]. 14-538
Investigation of Circuits of Use in Precision Radar Computers, Final Report [Cornell]. 14-546
Radar Trainer Equation-Solvers for the Relative Motion of Two Moving Objects in Space. RL-436
The Range Calculator. RL-497

COMPUTING DEVICES AND METHODS (Continued)

- Theoretical Calculation on Best Smoothing of Position Data for Gunnery Prediction.* RL-532
Nomograms for Computation of Modified Index of Refraction. RL-551
An H + B Impact Predicting Computer Assuming Constant Indicated Airspeed for Use with AN/APS-15A Radar. RL-584
Errors in Target Velocity Due to the Rolling and Pitching of the Ship. RL-612
Nomograms for Radar Bombing with the 100-Lb Practice Bomb M3A2. RL-614
Tests on the Performance of the Mk 1-Mod 7 Computer. RL-677
GPI for Close-Control Bombing. RL-783
Ground Course Computer for AN/APQ-T1. RL-856
AN/APG-13B Vulture Rocket Computer. RL-909
Computer Mark 14 AN/APA-30 XN-1 Instruction Manual. RL-M-179
Hygraph Instruction Manual. RL-M-230
Ground Position Indicator for Radar Navigation and Bombing. RL-S-19
Alignment Kit (Torpedo Rack) Mark 1 Mod 0. RL-S-42

CONTINUOUS WAVE RADAR

- Elimination of Ground Clutter.* RL-526
An Electronic Modulator for CW Magnetrons. RL-748
General Theory of Electronic Beam Modulators. RL-758

CORNER REFLECTORS

- Application of Corner Reflectors to Radar (Theoretical).* RL-203
Application of Corner Reflectors to Radar (Experimental). RL-280
Corner Reflector Tests at Langley Field. RL-402
Optical Theory of the Corner Reflector. RL-433
Observations of Life Rafts Equipped with Corner Reflectors, Feb. 15, 1944. RL-533
Corner Reflectors for Life Rafts, Aug. 1, 1944. RL-608
Design of a 4-Foot Corner Reflector for K-Band. RL-042
Rotating Corner Reflectors for Ship Identification. RL-054
Corner-Reflector Modulation of Airplane Signals. RL-913
A Proposed Design for MX-180/A Corner Reflector (Flint Marker, Radar, Droppable). RL-S-39

COUNTERMEASURES, Jamming, anti-jamming, camouflage, etc.

- Plan Position Indicator for 584 AJ.* RL-078
Synthetic Radar Echoes in the Presence of Jamming. RL-708
Radar Camouflage. RL-766
Pulsed-Interference Suppression. RL-820
S-Band Tunable Systems. RL-911

CONFIDENTIAL

COUNTERMEASURES (Continued)

Some General Microwave Anti-Jam Design Considerations and Performance of a Special Receiver.

RL-S-8

Detection of Propeller and Sumbo Modulations.

RL-S-10

Window Tests on AN/CPS-6, Leesburg, Florida, June 7 and 9, 1944.

RL-S-20

CRYSTALS

Detector and Mixer Crystals

The Principles of Crystal Rectifiers [U. of Pa.].

14-102

The Electrical Conductivity of Silicon and Germanium [U. of Pa.].

14-110

DC Burn-Out Temperature in Silicon Rectifiers

[U. of Pa.]. 14-113

Investigation of Crystal Rectifier DC Characteristics [Purdue].

14-115

Further DC Burn-Out Experiments on Silicon and Germanium Rectifiers [U. of Pa.].

14-119

Electron Microscopy of Tungsten Points [U. of Pa.].

14-125

Noise in Crystal Rectifiers [U. of Pa.].

14-126

The Diffusion Theory of Crystal Rectifiers [Purdue].

14-129

Theory of Noise in Conductors, Semi-Conductors, and Crystal Rectifiers [Purdue].

14-133

Barrier Capacity in Silicon Cartridge Rectifiers

[U. of Pa.]. 14-140

Determination of Logarithmic Constants of Crystal Rectifiers with the Oscilloscope [Purdue].

14-143

Measurement of Conversion Gain with a Modulated Oscillator [Purdue].

14-144

High-Frequency Rectification Efficiency of Crystals

[U. of Pa.]. 14-153

Theory of Signal to Noise Ratio of Crystal Mixers

[Cornell]. 14-162

Capacity in Crystal Rectifiers [U. of Pa.].

14-166

Crystal Noise as a Function of DC Bias and 30-Mc Impedance Measured with a Diode Noise Source

[Purdue]. 14-167

Theory of Contact Rectifiers [Purdue].

14-168

Ionization of Donator Levels in Crystal Rectifiers by Thermal Agitation [U. of Pa.].

14-173

Effect of Tapping on Barrier Capacity [U. of Pa.].

14-181

Behavior of Silicon Crystals at Low Level Powers

[U. of Pa.]. 14-182

Behavior of Westinghouse Silicon as a Low Level Detector [U. of Pa.].

14-186

Noise in Silicon Rectifiers at Low Temperatures

[U. of Pa.]. 14-189

Dependence of IF Impedance and Noise Temperature of Crystal Rectifiers on Matching Conditions

[U. of Pa.]. 14-194

Comparison of Wedge and Cone Contacts on For Silicon [U. of Pa.].

14-197

A Device for the Selection and Manufacture of Low Level Detectors [U. of Pa.].

14-201

CRYSTALS (Continued)

Recent Research on Silicon Rectifiers [U. of Pa.].

14-224

Noise Spectrum of Silicon Rectifiers [U. of Pa.].

14-256

The Theory of Crystal Mixers in Terms of Measurable Mixer Constants [Purdue].

14-259

Audio Noise Tester [U. of Pa.].

14-207

X-Band Video Crystals [U. of Pa.].

14-274

Production and Effects of a Depletion Layer in Doped Silicon [U. of Pa.].

14-282

High Frequency Characteristics of Rectifiers [Purdue].

14-284

Theory of Small Deviations from Pure Diode Behavior [Purdue].

14-280

Temperature Variation of Low Level Crystal Performance [U. of Pa.].

14-308

Note on the Measurement of Noise Temperature

[U. of Pa.]. 14-311

K-Band Germanium Crystals, Bi-Monthly Progress Report, Oct. 15, 1944 [GE].

14-328

Preparation of High Voltage Germanium Crystals

[Purdue]. 14-341

The High Voltage Germanium Rectifier, Section I—Experimental [Purdue].

14-342

Development of High Back Voltage Germanium Rectifiers, Interim Report No. 1, Nov. 21 1944.

[BTL]. 14-374

The High Voltage Germanium Rectifier, Section II—Theoretical [Purdue].

14-375

Effect of Small Crystallites on Conductivity [U. of Pa.].

14-377

K-Band Germanium Crystals, Bi-Monthly Progress Report, Dec. 15, 1944 [GE].

14-381

Crystal Audio Noise [U. of Pa.].

14-387

Test Equipment for Germanium Second Detector Units [Purdue].

14-394

Germanium Crystal Rectifier for Radar Receivers and Indicator Circuits, Interim Report No. 2, Dec. 16, 1944 [BTL].

14-399

Handy Guide to Crystal Types [U. of Pa.].

14-405

K-Band Germanium Crystals, Bi-Monthly Progress Report, Dec. 15, 1944—Feb. 15, 1945 [GE].

14-406

Photoeffects in Pure Silicon [U. of Pa.].

14-412

Properties of Germanium High-Back Voltage Rectifier Units [Purdue].

14-413

Dependence of Performance of Germanium Second Detector Units on Bias and Video Load [Purdue].

14-410

K-Band Germanium Crystals, Final Report [GE].

14-427

Behavior of X-Band Video Crystals [U. of Pa.].

14-428

Germanium Crystal Rectifier for Radar Receivers and Indicator Circuits, Interim Report No. 3, Mar. 13, 1945 [BTL].

14-441

High Back Voltage Silicon [U. of Pa.].

14-453

X-Band Crystal Video Performance with Bias [U. of Pa.].

14-450

CONFIDENTIAL

CRYSTALS (Continued)

- Handy Guide to Crystal Types, III* [U. of Pa.]. 14-499
- Development Research on X Band Video Crystals* [U. of Pa.]. 14-591
- Double Valued Characteristics of Crystal Rectifiers, Comments* [U. of Pa.]. 14-504
- Temperature Effects of S Band Video Crystals* [U. of Pa.]. 14-505
- Tests on German Crystals* [U. of Pa.]. 14-559
- Burnout Life Tests of X Band Video Crystals* [U. of Pa.]. 14-560
- Use of Different Fillers in Crystal Rectifiers* [U. of Pa.]. 14-561
- Research Development of Crystal Rectifiers, Final Report* [U. of Pa.]. 14-562
- Geometrical Structure of Silicon Surfaces* [U. of Pa.]. 14-563
- Burnout of S Band Video Crystals* [U. of Pa.]. 14-564
- Production and Performance of Germanium High Back Voltage High Back Resistance Crystal Rectifiers* [Purdue]. 14-577
- Dependence of Noise Temperature DC and IF Crystal Conductance on Matching Conditions* [Purdue]. 14-578
- Temperature Dependence of High Voltage Germanium Rectifier DC Characteristics* [Purdue]. 14-579
- Photoelectric Effects in Germanium* [Purdue]. 14-580
- Dependence of Forward Conductance and Back Resistance of High Back Voltage Germanium on Voltage and Frequency* [Purdue]. 14-581
- Radar Tube Model Shop, Final Report* [Sylvania]. 14-582
- Crystal Capacity as a Function of Bias and Its Relation to the Theory of Crystal Rectification* [Purdue]. 14-584
- Final Report on Crystal Development for Radar Receivers* [Purdue]. 14-585
- Special Report on Comparative Signal Noise Measurements on Crystal Mixers and Grounded Grid Tube Mixers* RL-110
- Report of the Radio Frequency Section, Crystals.* RL-140
- Theory of High-Frequency Rectification by Silicon Crystal.* RL-184
- Theory of the Boundary Layer of Crystal Rectifiers.* RL-185
- An S-Band Crystal Mixer.* RL-242
- A Simplified Analysis of Conversion Loss of Crystal Converters.* RL-253
- Pre-Ignition Transmission through Gas-Switching Tubes and Its Contribution to Crystal Failures.* RL-254
- Testing of 1N21 Navy Crystal Rectifiers.* RL-256
- Conversion Loss Measuring Apparatus for Crystals in the 3-Cm Band.* RL-257

CRYSTALS (Continued)

- A Simple Method for Determination of the Law of a Crystal.* RL-270
- Committee on Centimeter Receiving Tubes and Resonators.* RL-286
- Theory of Radar Mixers.* RL-287
- Noise Measurements on Microwave Converters.* RL-289
- Theory of Noise Measurements on Crystals as Frequency Converters.* RL-293
- Use of the Temperature-Limited Diode in Measurements of Noise Figures of Crystals.* RL-294
- Noise as Measurement of Noise, Gain and Noise Figure of Converters.* RL-295
- Noise Temperature Measuring Apparatus for Crystals as 10,000 to 30 Megacycle Converters.* RL-296
- Low-Level Crystal Detectors.* RL-297
- A Reciprocity Theorem and Its Application to Measurement of Gain of Microwave Crystal Mixers.* RL-300
- Maximum Power Limitations of Silicon Crystals.* RL-359
- Comparison of the Usual Methods of Measuring Conversion Loss of Crystals and a New Empirical Method.* RL-408
- Low Level Crystal Detectors, Effect of Heat and Cold.* RL-440
- Report on K-Band Work in U. S. A.* RL-475
- Operation of 1N23 Crystal Rectifiers.* RL-496
- Manufacturing Procedure for the Radiation Laboratory High Burn-Out Crystals.* RL-501
- Crystal Life Tests under Flat Pulses.* RL-543
- A Broad-Band Balanced Mixer for S-Band.* RL-916
- Performance of Microwave Harmonic Mixers.* RL-958
- Crystal Detectors and the Crystal-Video Receiver.* RL-638
- 1B38 Pre-TR.* RL-041
- A Feedback Circuit for Measuring Output Noise Ratio of Crystal Rectifiers.* RL-667
- A Conversion Loss Set for Testing K-Band Crystal Rectifiers.* RL-668
- The Generation of Harmonics by Silicon and Germanium Crystals.* RL-818
- 1N23 Loss Measuring Set Type 7368.* RL-M-171
- 1N21 Loss Tester Type 7556.* RL-M-177
- 1N23 Noise Measuring Set Type 7438.* RL-M-190
- 1N21 Noise Tester Type 11043.* RL-M-191
- General Lecture Series on Radar Components.* RL-T-18
- Material Development**
- Compounds of Silicon and Germanium* [U. of Pa.]. 14-112
- Spectroscopic Determination of Aluminum in Silicon* [U. of Pa.]. 14-127
- Effect of Etch on Crystal Rectifiers.* [U. of Pa.]. 14-165
- Radio-Active Detection of Aluminum in Silicon* [U. of Pa.]. 14-180

CONFIDENTIAL

CRYSTALS (Continued)

- Analysis of Silicon for Non-Volatile Matter* [U. of Pa.]. 14-204
- Sintering or Melting of Boron Powder, Progress Report*, Nov. 1, 1943 [du Pont]. 14-229
- Sintered Boron Project, Progress Report*, Dec. 1, 1943 [du Pont]. 14-231
- Sintered Boron Project, Progress Report*, Jan. 1, 1944 [du Pont]. 14-232
- Sintering and Melting of Boron Powder, Progress Report*, Feb. 1, 1944 [du Pont]. 14-240
- Progress Report on the Sintering and Melting of Boron*, Mar. 1, 1944 [du Pont]. 14-252
- Progress Report on Sintering and Melting of Boron Powder*, Apr. 1, 1944 [du Pont]. 14-262
- Progress Report on Sintering or Melting of Boron*, May 1, 1944 [du Pont]. 14-272
- Progress Report on Sintering or Melting of Boron Powder*, June 1, 1944 [du Pont]. 14-283
- Quantitative Spectroscopic Analysis of Impurities in Germanium and Silicon* [Purdue]. 14-285
- Sintering or Melting of Boron Powder, Progress Report*, July 1, 1944 [du Pont]. 14-292
- Effect of Heat Treatment on Low Level Performance* [U. of Pa.]. 14-304
- Progress Report on Sintering or Melting of Boron Powder*, Aug. 1, 1944 [du Pont]. 14-307
- Sintering or Melting of Boron and Preparation of Hyper-Pure Germanium, Progress Report*, Sept. 1, 1944 [du Pont]. 14-318
- Sintering or Melting of Boron and Preparation of Hyper-Pure Germanium, Progress Report*, Oct. 1, 1944 [du Pont]. 14-321
- Evaporated Films of Germanium and Silicon* [U. of Pa.]. 14-337
- Sintering or Melting of Boron and Preparation of Hyper-Pure Germanium, Progress Report*, Nov. 1, 1944 [du Pont]. 14-362
- Final Report, Part I—Sintering and Melting of Boron, Part II—Preparation of Hyperpure Germanium* [du Pont]. 14-386
- Heat Treatment of Germanium Rectifier Materials, Interim Report No. 4*, Aug. 3, 1945 [BTL]. 14-506
- Preparation of High Back Voltage Germanium Rectifiers* [BTL]. 14-555
- Mass Spectrometer Investigation of the Silicon Tetrachloride Used in Making Pure Silicon* [U. of Pa.]. 14-558
- Further Developments in the Preparation and Heat Treatment of Germanium Alloys* [Purdue]. 14-576

Supersonic Crystals, see also Transducers

- General Dynamical Considerations Applied to Piezo-Electric Oscillations of a Quartz Crystal in an Electrical Circuit* [Bartol]. 14-271
- Supplement to General Dynamical Considerations Applied to Piezo-Electric Oscillations of a Quartz Crystal in an Electrical Circuit* [Bartol]. 14-271S
- General Dynamical Considerations Applied to*

CRYSTALS (Continued)

- Piezo-Electric Oscillations of a Quartz Crystal in Electrical Circuit, Supplement II* [Bartol]. 14-587
- The R-1 and R-2 Crystal Drivers*. RL-045-8
- Specifications for 15-Mc Supersonic Crystal for Crystal Cartridges Types 3 and 7B*. RL-S-35
- Timer Crystals, see also Circuits and Networks*
- Crystal Clock Project, Third Progress Report*, May 1, 1943 [Bartol]. 14-145
- Crystal Clock Project and 10-Kc Oscillator, Progress Report*, Aug. 1, 1943 [Bartol]. 14-175
- Crystal Clock Project and 10-Kc L-C Oscillator, Progress Report*, Oct. 1, 1943 [Bartol]. 14-193
- Crystal Clock Project and 10-Kc L-C Oscillator, Final Report*, Jan. 1, 1944 [Bartol]. 14-226
- Pulsed Quartz-Crystal Oscillator*. RL-803
- DATA TRANSMISSION, see Remote Indication and Control Systems, Communication, and Relay Radar
- DELAY LINES, see Circuits and Networks
- DIELECTRICS, see also Absorbent Materials
- Progress Report on Ultra-High Frequency Dielectrics*, OSRD 1197, LIR Report I, Jan., 1943 [MIT]. 14-121
- The Interaction Between Electromagnetic Fields and Dielectric Materials*, OSRD 1198, LIR Report II [MIT]. 14-122
- Measurement of Dielectric Constant and Loss with Standing Waves in Coaxial Waveguides*, LIR Report III [MIT]. 14-142
- Auxiliary Equipment for the M.I.T. Coax Instrument and Its Use*, LIR Report IV [MIT]. 14-210
- Table of Dielectric Materials, Volume I*, LIR Report V [MIT]. 14-237
- The Polystyrene Plastics as High-Frequency Dielectrics*, LIR Report VI [MIT]. 14-270
- High Dielectric Constant Ceramics*, LIR Report VII [MIT]. 14-300
- Table of Dielectric Materials, Volume II*, LIR Report VIII [MIT]. 14-425
- Techniques and Calculations Used in Dielectric Measurements on Shorted Lines*, LIR Report IX [MIT]. 14-490
- Low Thermal Expansion Plastics*, LIR Report X [MIT]. 14-539
- Titania Ceramics II*, LIR Report XI [MIT]. 14-540
- Design of Equipment for Measurement of Dielectric Constant and Loss with Standing Waves in Waveguides*, LIR Report XII [MIT]. 14-541
- An Apparatus for Determining Heat Distortion Characteristics of Plastics*, LIR Report XIII [MIT]. 14-542
- Development and Wide-Frequency Investigation of Dielectrics, Final Report*, LIR Report XV [MIT]. 14-544
- Theory of a "Black Body" Produced by a Combination of a Thin Screen and a Perfect Mirror*. RL-148
- Theory of a "Black Body" Produced by a Combination of a Thin Screen and a Perfect Mirror, Supplement to RL-148*. RL-154

CONFIDENTIAL

DIELECTRICS (Continued)

- A Method to Measure High-Frequency Permeability of a Ferromagnetic Body.* RL-155
Transmission through Dielectric. RL-113
Microwave Transmission. RL-121
Special Report on the Reflection of Plane Waves by Magnetic Substances. RL-146
Propagation in Waveguides Partly Filled with Dielectric. RL-174
Dielectric Transmission Measurement. RL-244
Corrosion of Copper, Brass, and Aluminum by Gaseous Dielectrics. RL-248
Radome Bulletin Number 4, Transmission and Reflection of Single Plane Sheets. RL-483-4
Radome Bulletin Number 5, Recent Dielectric Constant and Loss Tangent Measurements. RL-483-5
Radome Bulletin Number 7, The Measurement of High Reflections at Low Power. RL-483-7
Radome Bulletin Number 10, The Measurement of Small Reflections. RL-483-10
Radome Bulletin Number 12, Transmission and Reflection of Parallel Plane Sheets. RL-483-12
Radome Bulletin Number 15, The Measurement of Dielectric Constants in the One-Centimeter Band. RL-483-15
Radome Bulletin Number 17, Current Progress on R-F Research. RL-483-17
Radome Bulletin Number 19, Dielectric Constant and Loss Tangent Computation. RL-483-19
Dielectric Windows in Waveguide. RL-587
Dielectric Properties of Water and Ice at K-Band. RL-644
Waveguides Without Metal Walls. RL-726
Dielectric Phase Shifters for Waveguide. RL-788

DIODES, see Tubes

DIRECTORS, see also Computing Devices and Methods, Fire Control

- Accuracy Criteria for the Gun Director Mk 56.* RL-578
Errors in Target Velocity Due to the Rolling and Pitching of the Ship. RL-612
MTB Computing Radar Sight. RL-S-14
Alignment Kit (Torpedo Rack) Mark 1 Mod 0. RL-S-42
Tables for Use with Torpedo Director Mark 33-1. RL-S-60
Torpedo Director Mark 33 Mod 1. RL-S-63
Mark 151 Director. RL-S-75

DUPPLER, see Clutter, Moving Target Indication

EARLY-WARNING EQUIPMENT, see also Airborne, Ground, and Shipborne Radar

- Brief Description of MEW Microwave Early Warning.* RL-428
Florida Tests on ROSEHUPS against SCR-582, SCR-615, MEW. RL-596
Over-Water Tests of S-Band Early Warning for Ships, Vertical Coverage of the CXHR (SCI) Search System. RL-703
Flight Tests of AEW Block III Relay Link. RL-739
MTI for MEW. RL-752

EARLY-WARNING EQUIPMENT (Continued)

- Airborne Early-Warning Search Antenna.* RL-779
The AEW System, Book I, Airborne Equipment. RL-806-1
Instruction Manual for Model 6-B (MEW) Modulator. RL-M-139
MEW No. 1 Preliminary Instruction Book. RL-M-156A
MEW No. 2 Preliminary Instruction Book. RL-M-156B
MEW No. 3 Preliminary Instruction Book. RL-M-156C
Instruction Handbook for Radar Set AN/CPS-1A (Pre-production Sets). RL-M-156D
Preliminary Technical Manual for AEW. RL-M-180A
Preliminary Installation and Operating Instructions for Radar Set AN/CPS-6. RL-M-196
AN/CPS-7 Operations Room Equipment Supplementing Radio Set AN/CPS-1. RL-M-228
AEW, Airborne Early Warning. RL-S-26
AEW, Airborne Early Warning (RL-S-26 plus additional material). RL-S-27
AEW Bedford Trials. RL-S-32
Tactical Use of Delayed PPI Scopes of the AEW System. RL-S-36
Preliminary Report on Single Aircraft Target Ranges of AEW. RL-S-37
AEW Tactical Tests at Brigantine. RL-S-50

ECHO BOXES, see Test Equipment, Cavities

ELECTROMAGNETIC THEORY, see Theory

ENEMY EQUIPMENT

- Japanese Microwave Radar.* RL-S-24

ENGINEERING AND SPECIFICATIONS

- Corrosion of Copper, Brass and Aluminum by Gaseous Dielectrics.* RL-248
Temperature Rise in Anti-TR Racks (S. P. Hunt). RL-281
Specifications of Performance Tests for PPI Sinusoidal Potentiometers Types RL10E and RL14. RL-316
Vibration and Shock Comparison Tests of 7-In. Cathode-Ray Tubes in Two Different Type Mounts. RL-390
Sinusoidal Potentiometers Type RL10CB, RL10CD, RL10E, and RL14. RL-423
Lighthouse Tube Transmitter-Receiver LHTR Mk I. RL-429
The Cauling of Pressure-Tight Containers. RL-462
Antenna Parts and Measuring Equipment. RL-472
Manufacturing Procedure for the Radiation Laboratory High Burn-out Crystals. RL-501
Pulse Transformers Designed at Radiation Laboratory and Produced by General Electric Company and Westinghouse Electric and Manufacturing Company. RL-513
Relay Data Including Shock and Vibration Measurements. RL-747
Specifications for 15-Mc Supersonic Crystal for Crystal Cartridges Types 3 and 7B. RL-85

CONFIDENTIAL

ENGINEERING AND SPECIFICATIONS (Continued)

Shock Mounting and Vibrations. RL-T-16
 FIGHTERS, see Nightfighting
 FIRE-CONTROL SYSTEMS, see also Computing Devices and Methods, Directors, Tracking
 Computers for Radar Control of Plane-to-Plane Gun-
 ace [MIT]. 11-130
 Two Motor-Driven Gun Turrets [GE]. 14-230
 Development and Construction of a Turret Gyro
 Lead-Computing Sight for AGS Radar [GE]. 14-268
 The Sperry Stabilized Aircraft Gunlaying System
 (AGL-2), Intermediate Phase [Sperry]. 14-289
 Final Technical Report on AGL-1 Development [GE]. 14-385
 Motor Torpedo Boat (M.T.B.) Computing Radar
 Sight for Blind, Semi-Blind and Visual Fire
 [Sperry]. 14-392
 The Fairchild Central Station Computer—Part I, The
 Fairchild 50 Caliber M2 Computer and AGS Adap-
 tations for an Emerson Tail Turret, Part II, Final
 Report [Fairchild]. 14-433
 Development of Gun Fire Control System Mark 56,
 Final Report [GE]. 14-497
 Development and Production Samples of APG Series
 (AN/APG-5 and AN/APG-8) Radar Equipment
 [Galvin]. 14-569
 Manuscript Handbook of Maintenance Instructions
 for Radar Sets AN/APG-5 and AN/APG-5A [Gal-
 vin]. 14-569
 2CH1A1 (AGL-1) Aircraft Fire-Control Computer
 [GE]. 14-570
 Development of Gun Fire Control System Mark 56,
 Final Report [GE]. 14-497
 Final Report for Contract OEMR-1044, May 27, 1944
 to October 31, 1945—Part 6, Preliminary Ballistic
 Computer for a Gun Director System; Part 7,
 Ballistic Computer Mark 42, Mod. 0; Part 8, Bal-
 listic Computer Mark 42, Mod. 1, Ser. No. 1, OSRD
 6434 [Librascope]. 14-587
 Report on Preliminary Results with the XT-1, No-
 vember 15—December 24, 1941. RL-8
 On Aircraft Radio Sight. RL-4
 Third General Report on Section Activities Covering
 Period From May 14, 1941, to November 14, 1941.
 RL-5
 Interim Report of the Problems and Activities of
 Group G High-Power Ground Equipment. RL-30
 ARO Range Unit. RL-332
 Report of A.A.R. Test on XT-1 at Fort Monroe, Vir-
 ginia, February-March, 1942. RL-368
 Data on SCR-584 Control Equipment. RL-370
 Analysis of Firing Tests on Mark 51 Dam Neck, Vir-
 ginia. RL-371
 Report on Aircraft Radio Sight. RL-374
 Radar Target Control. RL-375
 Pictorial Brief of an Experimental AGL-1 Installa-
 tion. RL-377
 Project Dolphin. RL-385

FIRE-CONTROL SYSTEMS (Continued)

Amplidyne Servo for SCR-598 Surface Fire-Control
 Set. RL-435
 Brief Description of AN/TPG-1, AN/PPG-1, SCR-
 598, Developmental Seacoast Gunlaying Radar Set.
 RL-456
 Tests on M&H Oil Gear and an Amplidyne Servo for
 the SCR-598 Control Problem. RL-464
 A Condenser Phase Shifter Range Unit with Sine
 Wave Tracking for AN/TPG-1, AN/PPG-1, SCR-
 598. RL-516
 Final Report on SMTR. RL-559
 N° Gate Attachment for SCR-584. RL-566
 Antiaircraft Target Designation Equipment for
 Ships. RL-640
 Overland Fulcan. RL-647
 Analysis of the Tracking of the 584 X-Band System.
 RL-753
 Mark 56 U Chananograph. RL-805
 Slip-Ring Assembly for MK 56 Director. RL-877
 Analysis of the Tracking Error of the MK56X Sys-
 tem. RL-884
 K-Band Antiaircraft Fire Control. RL-1005
 Radar Set SCR-584—Preliminary Technical Instruc-
 tion Book. RL-M-132
 Fulcan System Manual. RL-M-152A
 AN/APG-13 Fulcan System Manual. RL-M-152B
 AN/APG-13 System Manual. RL-M-152C
 Instructions for Modifying the SCR-584 Modulator
 for Use in Aspen Transmitters. RL-M-155A
 Instructions for Modifying the SCR-584 Modulator
 for Use in Aspen Transmitters. RL-M-155B
 Preliminary Instruction Manual for Echo Box for
 SCR-584. RL-M-159
 Preliminary Instruction Manual for AN/APG-15.
 RL-M-178
 Preliminary Instruction Manual for AN/APG-15.
 RL-M-178B
 Handbook of Maintenance Instructions for the AN/
 APG-8 Airborne Radar Gunsighting Equipment.
 RL-M-214
 Preliminary Instruction Manual for AN/APG-15B.
 RL-M-215
 Preliminary Instructions for Radar System MK35.
 RL-M-240
 Preliminary Description of the MK 56 Gun Fire Con-
 trol System. RL-M-242
 Target Raft Transponder. RL-S 2
 General Description, Special Installation Require-
 ments and Mounting Discussions of AN/APG-5
 (ARO) Airborne Range Only Equipment. RL-S-6
 MTH Computing Radar Sight. RL-S-14
 DOLPHIN, Remotely Controlled Torpedo Rack Actu-
 ating Mechanism. RL-S-23
 Alignment Kit (Torpedo Rack) Mark 1 Mod 0.
 RL-S-42
 FREQUENCY MEASUREMENTS, see Test Equipment
 GENERAL, Progress Reports, Surveys, Lists, etc.
 Technical Report of Radiation Laboratory, June 1,
 1941 [NDRC]. 14-93

CONFIDENTIAL

GENERAL (Continued)

<i>Use of Microwave for Detection Purposes, Dec. 13, 1941 [NDRC].</i>	14-94
<i>Use of Microwave for Detection Purposes, Aug. 13, 1942 [NDRC].</i>	14-95
<i>Use of Microwave for Detection Purposes, Bimonthly Report, Mar. 13, 1942 [NDRC].</i>	14-100
<i>Use of Microwave for Detection Purposes, Bimonthly Report, June 1, 1942 [NDRC].</i>	14-101
<i>Use of Microwave for Detection Purposes, Bimonthly Report, Oct. 1, 1942 [NDRC].</i>	14-109
<i>Summary of Projects, Bimonthly Report, Jan. 1, 1943 [NDRC].</i>	14-113
<i>Summary of Projects, Radar Division 14, Mar. 1, 1943 [NDRC].</i>	14-124
<i>Summary of Projects, Bimonthly Report, May 1, 1943 [NDRC].</i>	14-141
<i>Bimonthly Project Status Report and Summary of Projects, July 1, 1943 [NDRC].</i>	14-170
<i>Bimonthly Project Status Report and Summary of Projects, Sept. 1, 1943 [NDRC].</i>	14-184
<i>Project List as of September 15, 1943 [NDRC].</i>	14-188
<i>Index of Radar Systems, Oct. 1, 1943 [NDRC].</i>	14-196
<i>Bimonthly Project Status Report and Summary of Projects, Nov. 1, 1943 [NDRC].</i>	14-213
<i>Project Report, Feb. 1, 1944 [NDRC].</i>	14-238
<i>Project Report, Apr. 1, 1944 [NDRC].</i>	14-242
<i>Index of Radar Systems, Feb. 13, 1944 [NDRC].</i>	14-244
<i>Index of Division 14, Reports, Other than Radiation Laboratory Reports, May 1, 1945 [NDRC].</i>	14-250
<i>Division 14 Contract List, June 1, 1944 [NDRC].</i>	14-270
<i>Project Report, June 1, 1944 [NDRC].</i>	14-277
<i>Project Report (Supplement to Division 14 Report No. 277), July 1, 1944 [NDRC].</i>	14-278
<i>Project Report, Aug. 1, 1944 [NDRC].</i>	14-301
<i>Radar Angle Tracking, Government Radar Patent Program, Technical Report No. 1 [NDRC].</i>	14-319
<i>U. S. Radar Survey, Section 1, Airborne Radar [NDRC].</i>	14-331
<i>U. S. Radar Survey, Section 2, Shipborne Radar [NDRC].</i>	14-332
<i>U. S. Radar Survey, Section 3, Ground Radar [NDRC].</i>	14-333
<i>U. S. Radar Survey, Section 4, Navigational Radar [NDRC].</i>	14-334
<i>U. S. Radar Survey, Section 4, Test Equipment [NDRC].</i>	14-336
<i>Project Report, Oct. 1, 1944 [NDRC].</i>	14-338
<i>Government Radar Patent Program, Technical Report No. 2, Precise Range Measurement and Tracking [NDRC].</i>	14-339
<i>Project Report, Dec. 1, 1944 [NDRC].</i>	14-373
<i>Government Radar Patent Program, Technical Report No. 3, Magnetrons [NDRC].</i>	14-384
<i>Project Report, Supplement, Jan. 1, 1945 [NDRC].</i>	14-588

GENERAL (Continued)

<i>Project Report, Feb. 1, 1945 [NDRC].</i>	14-400
<i>Government Radar Patent Program, Technical Report No. 4, Duplexing [NDRC].</i>	14-391
<i>U. S. Radar Survey, Section 7, Nomenclature Index [NDRC].</i>	14-393
<i>Government Radar Patent Program, Technical Report No. 6, Fundamental Radar Systems [NDRC].</i>	14-417
<i>Project Report, Apr. 1, 1945 [NDRC].</i>	14-420
<i>Government Radar Patent Program, Technical Report No. 5, R-F Components [NDRC].</i>	14-430
<i>Project Report, Division 14, June 1, 1945 [NDRC].</i>	14-440
<i>U. S. Radar Survey, Section 3, Ground Radar, Change 1 [NDRC].</i>	14-451
<i>U. S. Radar Survey, Section 4, Navigational Radar, Change 1 [NDRC].</i>	14-453
<i>Project Report, Division 14, Supplement, July 1, 1945 [NDRC].</i>	14-463
<i>U. S. Radar Survey, Section 4—Test Equipment, Change 1 [NDRC].</i>	14-465
<i>Project Report, Aug. 1, 1945 [NDRC].</i>	14-489
<i>Radar Model Shop, Final Report [Research Constr. Co.].</i>	14-556
<i>Project Report, Dec., 1945 [NDRC].</i>	14-565
<i>U. S. Radar Survey, Section 8—Airborne Radar, Change 1 [NDRC].</i>	14-568
<i>U. S. Radar Survey, Section 7—Nomenclature Index, Change 1 [NDRC].</i>	14-574
<i>Index of Division 14, NDRC Reports, First Supplement, Mar. 1, 1946.</i>	14-583
<i>Report of the System Group, Jan. 30, 1944.</i>	RL-28
<i>Present Status of Radiation Laboratory, Jan. 12, 1942.</i>	RL-32
<i>Present Status of Radiation Laboratory Program, Dec. 9, 1942 to July 1, 1943.</i>	RL-33
<i>Coordination, Dec. 19, 1940.</i>	RL-15
<i>Coordination, Jan. 2, 1941.</i>	RL-158
<i>Index of Regular Reports, Tests and Manuals, January 1944.</i>	RL-400
<i>Report on K-Band Work in U. S. A.</i>	RL-475
<i>Standards for Microwave Frequencies.</i>	RL-509
<i>Continuation of Index of Regular Reports, Special Reports, Manuals and Tests, Nov. 12, 1945.</i>	RL-800
<i>Continuation of Index of Regular Reports, Special Reports, Manuals and Tests, Mar. 7, 1946.</i>	RL-1083
<i>A Production Analysis of the Wartime Radio and Radar Industry.</i>	RL-S-31
<i>Thumbnail Sketch for December and January, 1945.</i>	RL-S-40
<i>Thumbnail Sketch for February and March, 1945.</i>	RL-S-46
<i>Thumbnail Sketch for April and May, 1945.</i>	RL-S-53
<i>Lecture Notes [J. C. Slater].</i>	RL-T-1
<i>Notes on Microwaves [W. W. Hansen].</i>	RL-T-2
<i>Microwave Radar, Volume 1, Theory and Practice of Pulsed Circuits.</i>	RL-T-5

CONFIDENTIAL

GENERAL (Continued)

Microscopic Technique as of May 1943. RI-T-13
General Lecture Series on Radar Components.

RI-T-18

GROUND RADAR, *see also* Beacons, Early Warning, Fire Control, Height Finding, Landing Navigation

Components

Final Technical Report for P-1 Adaptor Development [DuMont Labs.]. 14-330

Instruction Book for Precision P-1 Adaptor, DuMont Type No. 255 (Indicator-Trocker Unit BC 1365) [DuMont]. 14-340

Radar Scanning Unit, Final Report [Chrysler]. 14-566

Radar Rotating Antenna Spiral Scanning Units, Balance and Adjustment [Chrysler]. 14-573

Data on SCR-584 Control Equipment. RI-370

Medium-Precision Range System for CXGQ (Project Henry). RI-579

Increasing Stability of Operation of 4J31-35 Magnetrons in the AN/CPS-1 System. RI-621

Electrical Design of the AN/TPS-10 Antenna. RI-648

Low-Noise Replacement Pre-amplifier for the SCR-584 (BC-1408) RI-699

AN/TPS-10B R-F Head Termination Report. RI-880

Moving Target Indication on MEW. RI-1080

Handbooks

Features and Operations of Radio Set SCR-582. RI-394

Preliminary Handbook for Experimental Prototype Model Radio Set SCR-620, Supplement. RI-M-121

Handbook for Model CXEH (BGX) Radar Beacon. RI-M-129

Preliminary Manual for Radar Beacon Type BPS (Prototype of AN/CPN-8 Similar in Function and Components to SCR-620.) RI-M-136

Radio Set SCR-584—Preliminary Technical Instruction Book. RI-M-132

Technical Manual for Radio Set SCR-582, Mk III. RI-M-136

Modification of SCR-584 for Oboc II. RI-M-151

Instructions for Modifying the SCR-584 Modulator for Use in Aspen Transmitters. RI-M-155A

Instructions for Modifying the SCR-584 Modulator for Use in Aspen Transmitters. RI-M-155B

MEW No. 1 Preliminary Instruction Book. RI-M-156A

MEW No. 2 Preliminary Instruction Book. RI-M-156B

MEW No. 3 Preliminary Instruction Book. RI-M-156C

Instruction Handbook for Radar Set AN/CPS-1A (Pre-production Sets). RI-M-156D

Lightweight Loran Transmitter (LITX). RI-M-158A

Preliminary Handbook for Experimental Prototype Model Radio Set SCR-620 (Same as RI-M-121). RI-M-161

GROUND RADAR (Continued)

Harvey 170-T Loran Transmitter Manual.

RI-M-162

Radar Beacon, Mark I Mod. 1. RI-M-167

Preliminary Instruction Book for Shore Bombardment Beacon Navy Model Mack 2 Mod 0 and Mod 1. RI-M-185

Preliminary Installation and Operating Instructions for Radar Set AN/CPS-6. RI-M-196

Preliminary Technical Manual for SCR-584 MTI Modification Kit No. MC-642-AS and Fan Beam Search Antenna. RI-M-218

Preliminary Instructions on Modification Kit MC-627 for Radio Set SCR-584. RI-M-220

Preliminary Instructions on Modification Kit MC-627 for Radio Set SCR-584 (Revised). RI-M-220R

AN/CPA-7 Operations Room Equipment Supplementing Radio Set AN/CPS-1. RI-M-228

Performance

Report on Preliminary Results with the XT-1. RI-8

Regular Report on the XT-3. RI-59

Antiaircraft Artillery Board Test on the Simplified Circular Sweep Range. RI-326

Report of A.A.B. Test on XT-1 at Fort Monroe, Virginia, Feb.-Mar., 1942. RI-268

Performance Report of the High-Power Ground System. RI-373

Tests on a M3B1 Oil Gear and an Ampidyne Servo for the SCR-598 Control Problem. RI-464

Results of Tests on Use of Rebecca-Eucaly by the Army Ground Forces. RI-500

Tests of Beacon Receiver on V-Beam. RI-522

Florida Tests on ROSEBUDS against SCR-582, SCR-615, MEW. RI-596

A Description of AN/TPS-10 and Its Performance in Mountainous Terrain. RI-606

Window Tests on AN/CPS-6, Leesburg, Florida, June 7 and June 9, 1944 RI-S-20

A Survey of the AN/TPS-10 (Little Abner). RI-S-69

MEW Clear Control. RI-S-76

Systems and Attachments

U. S. Radar Survey, Section 3, Ground Radar [NDRC] 14-333

Preliminary Instructions for Experimental HRY Equipment [Zenith Radio Corp.]. 14-380

Radio Set AN/MPN-1 (XE-1), Ground Controlled Approach (GCA) Radar, Technical Report [Gillilan]. 14-449

U. S. Radar Survey, Section 3, Ground Radar, Change 1 [NDRC]. 14-451

Third General Report on Section Activities Covering Period from May 14, 1941 to November 14, 1941. RI-5

Interim Report of the Problems and Activities of Group G (High-Power Ground Equipment). RI-36

Roof Systems Reports, August 26, 1941 to September 24, 1941. RI-46

Regular Report on the XT-3, Oct. 22, 1941. RI-58

CONFIDENTIAL

GROUND RADAR (Continued)

- Systems and Attachments (Continued)*
- Regular Report on the XT-3 (The Tra Centimeter Truck System), Nov. 26, 1941.* RL-59
- A Radar Prospectus with a Pictorial Brief of DGS.* RL-357
- RTS 10-Cm Radar Beacon.* RL-358
- Brief Description of MEW Microwave Early Warning.* RL-428
- GCA Ground Controlled Approach.* RL-438
- MHF Mobile Height Finder Modified SCR-615.* RL-444
- Brief Description of AN/TPG-1, AN/FPG-1, SCR-598, Decelerational Search Gunlaying Radar Sets.* RL-456
- Roughed Microwave Beacon Equipment.* RL-460
- Track-Mounted SCR-582 Mk III, a General-Purpose Microwave Set.* RL-474
- Light Mountain Radar Set.* RL-491
- Beavertail Height Finder AN/CPS-4.* RL-504
- V-Beam GC Radar.* RL-507
- A "Range Only" Set for "Close-In Spring."* RL-598
- T-5 Field Chronograph for SCR-584.* RL-968
- Automatic Plotter RC-308 Used with SCR-584 for Marlar Location.* RL-990
- Marlar Fire Detection.* RL-1064
- K-Band Antiaircraft Fire Control.* RL-1065
- Operating Instructions for the K-Band Rapid-Scan System.* RL-M-248

GUIDED MISSILES

- Final Report on SRB.* RL-403
- Radio Set RHB, Section I, Technical Description of the Production Model Radio Set RHB; Section II, Adjustment and Alignment of Radio Set RHB.* RL-508-1
- Radio Set RHB, Section III, Glider Checkout Procedure.* RL-508-2
- Radio Set RHB, Section IV, RHB Test Equipment.* RL-508-3
- Theory and Design of Guided Missiles Control System AN/APW-3.* RL-1028

GUN LAYING, see Fire Control Systems, Sights

HANDBOOKS, see Airborne Radar, Ground Radar, Shipborne Radar, Test Equipment, etc.

HEIGHT-FINDING RADAR

- Radar Height-Finding.* RL-21
- Interim Report of the Problems and Activities of Group G (High Power Ground Equipment).* RL-30
- A Condenser Phase Shifter Range Circuit with Sine Wave Tracking Suitable for Microwave Height-Finding Station.* RL-339
- Altitude Determination by Means of a Vertical PPI.* RL-351
- Supplementary Report on Altitude Determination by Means of an Expanded Elevation Indicator, Vertical PPI.* RL-354
- MHF Mobile Height Finder Modified SCR-615.* RL-444
- Beavertail Height Finder AN/CPS-4.* RL-504

HEIGHT FINDING RADAR (Continued)

- SM Radar.* RL-506
- V-Beam GC Radar.* RL-507
- Tests of Beacon Receiver on V-Beam.* RL-522
- The SCI Rapid Scan Height-Finding Antenna.* RL-688
- Preliminary Installation and Operating Instructions for Radar Set AN/CPS-6.* RL-M-196

HIGH POWER

- K-Band High-Power Water Load.* RL-723
- Experiments in Microwave Breakdown.* RL-731
- Present Status of High Power at S-Band.* RL-793

HOMING, see Beacons, Guided Missiles, Landing Systems, Navigation

IFF, see also Absorbent Materials, Beacons, Propeller Modulation

- S-Band ASV Marker.* RL-228
- Roughed Microwave Beacon Equipment.* RL-460
- SM Radar.* RL-506
- Rotating Corner Reflectors for Ship Identification.* RL-654
- Black Maria, Coincident Cross-Band Transponder for S-Band Radar (AEW).* RL-672
- Shipborne Black Maria Antennas.* RL-796
- Project TGI (AN/APX-11, AN/APX-16).* RL-1081
- Preliminary Technical Manual for AEW.* RL-M-180A

Preliminary Instruction Manual for X-Band Coincident Beacon XCR (Mark I) AN/APX-14.

- Preliminary Instruction Manual for S-Band Coincident Transponder Black Maria, RT-74/APX.* RL-M-199
- Preliminary Book of Maintenance Instructions for Shipboard Components of AEW.* RL-M-229
- Detection of Propeller and Samba Modulations.* RL-S-10

IMPEDANCE MEASUREMENTS, see Test Equipment, Transmission Lines

INDICATORS, see also Cathode-Ray Tubes

- Indicator Types as of October 1942 [NDRC].* 14-114
- Final Technical Report for PPI Adaptor Development [DuMont Labs.].* 14-330
- Instruction Book for Precision PPI Adaptor, DuMont Type No. 255 (Indicator-Tracker Unit RC 1365) [DuMont Labs.].* 14-340
- Performance and Stability of Triggered Gates [Rensselaer Polytech.].* 14-445
- Errors in Range Measurement with a Circular Sweep.* RL-9
- Improvements in the Spot Error Indicator.* RL-10
- Roof System Report, Initial Development—February 15 to April 1, 1941.* RL-37
- Navy Roof, etc., Aug. 26, 1941.* RL-39
- Roof System Reports, August 26, 1941, to September 24, 1941.* RL-40
- Regular Report on Indicators and Synchronizers, Oct. 15, 1941.* RL-47

CONFIDENTIAL

INDICATORS (Continued)

Regular Report on Indicators and Synchronizers,
Nov. 19, 1941. RL-48
Indicators and Synchronizers, Dec. 24, 1941. RL-49
Report of Activities of Synchronizer Section, Nov.
5, 1941. RL-75
RF Envelope Indicator Instruction Manual. RL-77
Correction of the Scanning of Shipborne Radar Sys-
tems for Roll and Pitch of the Ship. RL-126
Cathode-Ray Indicator. RL-130
Report of the Indicator Section. RL-131
Brief Report of Activities from February 12 to
March 21, 1941. RL-132
Report of Section VI, March 4 to March 22, 1941.
RL-133
Report by Indicator Group, Feb. 13, 1941. RL-134
Special Report for the Cathode Ray Tube Section,
Brief Summary of Results of Persistence Calcula-
tions, Feb. 28, 1941. RL-135
Persistence Measurements, July 7, 1941. RL-136
Luminescence of RCA Cathode-Ray Tube with Cas-
cade Screen. RL-137
Indicator Components as Fixed in a Complete Air-
craft Interception Installation. RL-138
Recommended Designations of Radar Indicator
Types. RL-159
Plan Position Indicators. RL-308
Proposed Performance Specifications for the P7
Long-Persistence Cascade Screen. RL-309
Report on Measurement of British CR Tubes with
Long-Persistence Screens. RL-310
AIA Indicators. RL-311
Plan-Position Indicator Using a Sinusoidal Potenti-
ometer. RL-312
Conference on P7 Cathode-Ray Tubes Held April 5
and 6, 1943. RL-314
A Shipborne Mechanical Rotation Plan-Position Indi-
cator. RL-315
Specification of Performance Tests for PPI Sinu-
soidal Potentiometers Types RL10K and RL14.
RL-316
Indicators for a Ground-Controlled Approach Sys-
tem. RL-317
Errors in Circular Sweeps Due to Decentering and
Ellipticity of Circle. RL-328
Altitude Determination by Means of a Vertical PPI.
RL-351
Supplementary Report on Altitude Determination
by Means of an Expanded Elevation Indicator, Ver-
tical PPI. RL-351
Maximum Allowable Negative Backswing after
Pulses. RL-363
Photographs of the PPI Indicator Tube with 3-Cm
ASV over Water and Land. RL-381
Theoretical Derivations Based on Superposition of a Plat-
ting Board on the PPI Pattern. RL-387
Some Photographic Measures of PPI Linearity and
Addendum. RL-389
Vibration and Shock Comparison Tests of 7-In.
Cathode Ray Tubes in Two Different Type Mounts.
RL-390

INDICATORS (Continued)

Studies of British Phosphors of the Type "C," "H,"
"K," and "M". RL-405
Range Height Indicator. RL-418
A Report on ASD-1 B-Scope Photography. RL-439
The Identification of Signals on PPI Photographs for
the Construction of Radar Maps. RL-449
On the Fluctuations in Signals Returned by Many
Independently Moving Scatterers. RL-465
On the Appearance of the A-Scope when the Pulse
Travels through a Homogeneous Distribution of
Scatterers. RL-466
Precise Navigation by Means of a Radar Map Super-
posed on the PPI. RL-503
A Method for Relay Radar PPI Synchronization.
RL-505
Lighthouse R-F Envelope Indicator. RL-542
A Precision Plan Position Indicator. RL-560
A Precision X Sweep Generator. RL-563
A Precision Self-Synchronous Range System for
PPI. RL-573
Medium Precision Range System for CXGQ (Project
Henry). RL-579
Performance Characteristics of Army-Navy Pre-
ferred Type Electrostatic Cathode Ray Tubes.
RL-588
Investigation of Properties of Dark Trace Cathode
Ray Tubes. RL-597
Effects of Line and Cathode-Follower Terminations
on Pulse Shape. RL-616
Plan Position Indicator for 884 AJ. RL-678
Synthetic Radar Echoes in the Presence of Jam-
ming. RL-708
Tokyo H2X Photographs, Comparison of Operational
PPI Photographs with PPI Predictions of the
Ultrasonic Radar Trainer. RL-715
PPI (Photographic Projection PPI). RL-725
A/R Range Scope. RL-755
Tests of a Type C Data Presentation with a Spiral-
Scan Aircraft-Interception System. RL-767
PPI Off-Center Conversion Kit (MX 364/CPS).
RL-778
GPI for Close-Control Banking. RL-783
Tests of Aided Tracking with PPI. RL-797
Notes on Photometry, Colorimetry, and an Explan-
ation of the Centibel Scale. RL-804
General Purpose Indication System. RL-817
AN/APS-30 Series Indication System. RL-834
Video Mapping. RL-890
Three Tone PPI. RL-934
SN-41/APA-53 (Cordillone II Synchronizer) and IN-
188/APA-53 (Cordillone II Indicator). RL-937
The Use of Synchronizers for Radar Time Base Displays.
RL-941
A Trigger Generator for Signal Threshold Studies.
RL-1036
Instruction Manual for R-18 Radar Installation.
RL-M-100
Instruction Manual for R-18 Indicator Components
(Included in RL-M-100). RL-M-102

CONFIDENTIAL

INDICATORS (Continued)

- Operating Instructions for the Model B PPI Indicator Central. RL-M-107
- Instructions for Type K Self-Synchronous Oscilloscope. RL-M-109
- Instruction Manual for Audio Indicator Type 123R. RL-M-122
- Manual for Operation and Maintenance of TW Audio Indicator. RL-M-134
- Instruction Manual for Projection PPI. RL-M-137
- AN/APR-15 Receiver-Indicator Modified for Ground Range Sweeps and Remote Amplifier. RL-M-172A
- Electronic Cursor for AN/APR-15. RL-M-175
- Operating Instructions for Sweep Calibrator, Model R. RL-M-188
- Handbook of Operating Instructions for Loran Low Frequency Converter CV-27/UPN. RL-M-222
- Handbook of Maintenance Instructions for Loran Low Frequency Converter CV-27/UPN. RL-M-225
- Handbook of Maintenance Instructions for AN/APA-55 Indicator Assembly. RL-M-243
- Operating and Maintenance Instructions for Indicator for Rapid Scan System. RL-M-249
- Testing of Skiatrons. RL-S-1
- Testing of Skiatrons (Supplement). RL-S-1a
- A Comparison of "Positive" and "Negative" Intensity Modulation of PPI Displays. RL-S-4
- Comparison of P5 Screen Test Methods. RL-S-9
- Model 5 Synchroscope. RL-S-18
- Ground Position Indicator for Radar Navigation and Bombing. RL-S-19
- Tactical Use of Delayed PPI Scopes of the AEW System. RL-S-36
- Waveforms, Voltage and Resistance Measurements in AN/APA-5 Indicator Equipment. RL-S-38
- H2K Radar Displays. RL-S-43
- Release Point Indicator Used in Conjunction with RC-294. RL-S-47
- Tabulation of CRT Screen Properties. RL-S-48
- PPI Photographs from AEW. RL-S-51
- General Lecture Series on Radar Components. RL-T-18

INTERFERENCE, see also Noise

- Reduction of Radar-Radio Interference from Modulators. RL-431
- Shielding of Microwave Receivers against Interference at Intermediate Frequencies. RL-471
- Interference Blunker. RL-749
- Interference Between SCR-584's Tracking APN-19 Beacons. RL-816
- X-Band Sea-Return Measurements. RL-870

JAMMING, see also Countermeasures

- Off-Frequency G-W Jamming. RL-910
- Synthetic Radar Echoes in the Presence of FM Jamming. RL-1035

KLYSTRONS, see Tubes, Velocity-Modulated

LANDING SYSTEMS, see also Beacons, Navigation

- S-Band ASV Marker. RL-298
- Special Report on Holometer Blind Landing System. RL-7

LANDING SYSTEMS (Continued)

- Pill Box Antenna for Glide Path. RL-260
- Indicators for a Ground-Controlled Approach System. RL-317
- GCA Ground Controlled Approach. RL-438
- A Simplified Search Antenna for Radio Set AN/MPN-1. RL-436
- Ultra-Portable Microwave Radar Beacons as Beam Approach Aids in Aircraft Landing. RL-581
- A Simple Trainer for GCA Approach Controller. RL-669
- Identification of GCA Search Targets. RL-670
- The Trainer for Radio Set AN/MPN-1. RL-676
- HUPN (AN/UPN-3, 4, AN/APN-11) Ultra-Portable X-Band Radar Beacons and Their Tactical Uses. RL-710

LIGHTHOUSE TUBES, see Tubes, R-F Heads

LOCAL OSCILLATORS, see Tubes, Receivers

LORAN, see Navigation

MAGNETRONS, see also Cathodes

- One Centimeter Magnetron Research [CRL]. 14-120
- Scaling and Relative Efficiency of Different Sized Magnetrons [Bartol]. 14-176
- Progress Report on the Development of One and Three CM Magnetrons [CRL]. 14-223
- The Elimination of Extrinsic Resonance Effects in Tunable Centimeter Magnetrons [CRL]. 14-233
- The Tuning Properties of the Tunable Magnetrons in the Three Centimeter Band [CRL]. 14-234
- Cold Impedance of E5 Tubes [CRL]. 14-235
- Columbia Radiation Laboratory Progress Report, Jan. 1, 1944 [CRL]. 14-239
- Waveguide Output for 1.25 Centimeter Magnetrons [CRL]. 14-245
- Progress Report for Columbia Radiation Laboratory, February 1944 [CRL]. 14-260
- Columbia Radiation Laboratory Progress Report, March 1944 [CRL]. 14-266
- Technical Report on K-Band Magnetron, May 22, 1944, and Supplement, Aug. 21, 1944 [West. E. & M. Co.]. 14-299
- Equivalent Circuit for Resonant Modes of a Magnetron, Zero Mode [CRL]. 14-322
- The Resonant Modes of the Rising Sun (A Tube) Anode [CRL]. 14-323
- Mica Windows for Waveguide Output Magnetrons [RCA]. 14-366
- Waveguide Output Magnetrons Employing Fused Quartz Output Transformers [RCA]. 14-367
- Government Radar Patent Program, Technical Report No. 3—Magnetrons [NDRC]. 14-384
- Frequency Stabilization of Oscillators by a Method Particularly Adapted to the Higher Frequencies and Magnetron Sources [RCA]. 14-397
- Final Report Covering Development Work Done on High-Power S-Band Magnetrons (HP-10Y) and Series Gaps [Machlett Labs.]. 14-423
- Final Report on the Development of Magnetron Generators of High-Power and of Short Wavelengths [BTL-WEI]. 14-431

CONFIDENTIAL

MAGNETRONS (Continued)

- K-Band Magnetron, Technical Report [RCA]. 14-414
Magnetrons and Detector Beat-Oscillator Receivers
with Record of Material Furnished [BTL]. 14-450
Operations of the Project Tube Shop, Harrison, N. J.
[RCA]. 14-500
Preliminary Oscillograph Studies of RF Build-up in
Magnetron (XIV) [LIR-MIT]. 14-543
Final Report on Radar Tube Model Shop [Sylvania].
14-582
Magnetrons for Production of Centimeter Wave-
length Radiation, also Absorption of Such Radia-
tion in Water Vapor [CRL]. 14-588
Rising Sun Magnetron with Large Number of An-
ode Cavities for Centimeter and Millimeter Wave-
lengths [CRL]. 14-589
Regular Report on the Components Testing System,
Oct. 8, 1941. RL-41
Transmitting Tube Section, Dec. 2, 1940. RL-79
Transmitting Tube Section, Dec. 17, 1940. RL-80
Transmitting Tube Section, Jan. 13, 1941. RL-81
Transmitting Tube Section, Jan. 28, 1941. RL-82
Transmitter Tube Section, Mar. 18, 1941. RL-83
Transmitter Tube Section, May 19, 1941. RL-84
Transmitter Tube Section, July 1, 1941. RL-85
Guide to the Operation of 10 Cm Standard Magne-
trons. RL-86
Special Report of Characteristics of 3-Cm Magnetrons
and Instructions for Their Operation. RL-87
Note on Design of Magnetrons. RL-88
Cathode Temperatures in Magnetrons. RL-90
Theory of the Magnetron Oscillator. RL-118
Theory of the Magnetron Oscillator, Electronic
Orbits in the Cylindrical Magnetron with Static
Fields. RL-122
Theory of the Split-Anode Magnetron. RL-127
Report of the Radio-Frequency Section. RL-140
3-Cm Magnetron Cold Impedance. RL-163
Theory of Space Charge in an Oscillating Magnetron.
RL-176
Resonant Modes of the Magnetron. RL-182
Input Impedance and Tuning of Magnetron Cavities.
RL-190
Theory of Magnetron Operation. RL-200
Numerical Calculation of Space Charge Behavior and
Power in the Magnetron. RL-201
Preliminary Report on Frequency Shift vs. Magne-
tron Box Temperature. RL-220
RF Loading of 10-Cm Magnetrons. RL-221
Strapping Tolerances for Magnetrons. RL-222
Magnetron Strapping Wavelength Calculations.
RL-223
Fourier Analysis of Pulses with Frequency Shifts
during the Pulse. RL-224
Frequency and Spectrum Characteristics of Stand-
alone Magnetrons and the Effect of Change of
Shape of Current Pulse. RL-225
Practical Considerations of Magnetron Design.
RL-226

MAGNETRONS (Continued)

- Performance Characteristics of the Magnetron under
Conditions Simulating Beacon Operation, Tube
Types 2J38 and 2J22. RL-227
Spectra of Magnetrons for Long Pulses. RL-228
Analysis of Magnetron Performance, Part I, Equip-
ment Circuit, Method, Applications. RL-229
Field Patterns in Cold Magnetrons, Including Corre-
lation with Tube Performance and Tunable Design.
RL-230
Preheating of Tubes for G-Band. RL-238
Maximum Allowable Negative Backswing After
Pulses. RL-363
Adjustment of Magnetron Frequency by an External
Tuner. RL-412
Report on Western Electric 717A Modulator Type
D-150432 and Radio-Frequency Unit Type D-
150452. RL-425
Cold Resonance Theory of the Waveguide Tunable
Magnetron. RL-445
Analysis of Magnetron Performance, Part II, De-
tailed Study of the Operation of a Magnetron.
RL-451
Magnetron Stabilizing Tuner. RL-473
Report on K-Band Work in U. S. A. RL-475
Radome Bulletin 18, The Dependence of Magnetron
Pulling on Radome Shape and Orientation.
RL-483-18
The Resonant Modes of Magnetron Cavities. RL-493
Magnetron Starting Time. RL-509
Proposed Method for Measuring Instantaneous Mag-
netron Input Impedance with the Aid of a Delay
Network. RL-515
Pulse Shapes and R-F Spectra for Combinations of
Strandberg-Carlson Mack I and Mack II Modula-
tors with 2J22, 2J21, and 725A Magnetrons.
RL-518
Effect on Current Pulse of Resistance in Series with
the Magnetron. RL-527
An Automatic Frequency Control and Frequency
Selection System for Magnetrons. RL-541
Magnetron Tuning and Stabilization. RL-567
Effects of Variation of Vane Width and Cathode Size
on the Operation of Magnetrons. RL-586
Cathodes for Pulsed Magnetrons, Part I, Correla-
tions Between Oscillating and Diode Conditions.
RL-609
Stability of Magnetrons Operated by Spark Gap
Modulators. RL-620
Increasing Stability of Operation of 4J31-35 Mag-
netrons in the AN/CPS-1 System. RL-621
Influence of Pulse Transformer Design on 4J31-35
Magnetron Stability. RL-622
Frequency Drift of Certain X-Band Magnetrons.
RL-663
Cathodes for Pulsed Magnetrons, Part II—Construc-
tion and Performance of Pulsed Cathodes. RL-683
The Regulation Obtainable in the Operation of a
Hard Tube Modulator with Magnetron Load.
RL-697

CONFIDENTIAL

MAGNETRONS (Continued)

- An Electronic Modulator for CW Magnetrons. RL-748
- General Theory of Electronic Beam Modulators. RL-758
- Analysis of Line Modulator for Hokeator with a Sparking Magnetron Load. RL-765
- Present Status of High Power at S-Band. RL-793
- Mode Selection in Magnetrons. RL-809
- XCT Final Report. RL-879
- LCT, 900 MC/SEC FM-CW Magnetron. RL-1005
- The 4J70-77 Series of Tunable Magnetrons. RL-1006
- Final Report on the RM50 Magnetron. RL-1007
- A Method for Calculating Magnetron Resonant Frequencies and Modes. RL-1039
- R-F Phasing of Pulsed Magnetrons. RL-1051
- 3-Cm Magnetron Test Bench Construction and Operation. RL-M-114
- Manual for Magnetrons, Type RJ 22-33, 706AY-GY, 714AY and 718AY-EY. RL-M-116
- Microwave Technique as of May 1943. RL-T-13
- General Lecture Series on Radar Components. RL-T-18

MAINTENANCE, see Airborne, Ground, and Shipborne Radar, Performance, Test Equipment

MAPPING, see Navigation and Mapping

MATERIALS, see also Absorbent Materials, Crystals, Dielectrics

- Development of Electrical Brushes through Powdered Metallurgy, Technical Report of Research Work Conducted at the Metal Powder Laboratory [Stevens]. 14-313
- Corrosion of Copper, Brass and Aluminum by Gaseous Dielectrics. RL-248
- The Application of Powdered Iron Materials as Permeable Dielectrics at Microwave Frequencies. RL-906

MCCALLY TUBES, see Tubes, Velocity-Modulated

METEOROLGY, see Propagation

MISCELLANEOUS

- Clearance for Carbon Brush Investigation [MIT]. 14-138
- X-Ray Emission from Radar Equipment, Report of Division 14, NDRC [MIT]. 11-157

MIXERS, see Crystals, Receivers

MODULATION, FREQUENCY, VELOCITY, etc., see Tubes, Theory

MODULATORS, see also Pulse Transformers

- Roof System Report, Initial Development, Feb. 15—Apr. 1, 1941. RL-37
- Pulsers, Dec. 2, 1940. RL-66
- Pulsers, Dec. 27, 1940. RL-67
- Pulsers, Feb. 1, 1941. RL-68
- Modulators and Synchronizers, Mar. 25, 1941. RL-69
- Modulators, May 11, 1941. RL-70
- Report of the Modulator Group, July 31, 1941. RL-71

MODULATORS (Continued)

- Regular Report of Modulator Group, Nov. 4, 1941. RL-72
- Instruction Manual Browning Type A Synchronizer. RL-74
- Report of Activities of Synchronizer Section, Nov. 5, 1941. RL-75
- Test Set for Raytheon Service Modulator, Instructions for Operation and Testing. RL-76
- Instruction Manual for Raytheon Service Modulator HX-3587A. RL-78
- Spark-Gap Colloquium at Radiation Laboratory, MIT, July, 1942. RL-207
- Modulator Colloquium, Apr. 16-17, 1943. RL-208
- Rotary Spark Gap Modulators. RL-209
- Tests on Five Types of Triggered Switch Modulators. RL-210
- Report on Some Tubes Used in Hard Tube Modulators. RL-211
- Report on Hard Tube Modulators and Drivers. RL-212
- Pulse Transformers. RL-213
- Line-Controlled Blocking Oscillator. RL-214
- Measurement and Design of D-C Resonant Charging Chokes. RL-215
- Modulated Pulse Communication. RL-216
- Pulse Transformers. RL-217
- Oscilloscope Presentation of Hysteresis Loops at 60 Cycles and under Pulse Conditions. RL-218
- Test Equipment for Pulse Transformers. RL-219
- Multiple Pulse Generators. RL-278
- Frequency Division with Blocking Oscillator Pulse Transformers. RL-329
- Line Controlled Blocking Oscillator Marker Generator ARO Calibrator. RL-330
- Pulsed Oscillator and Phase Shifter. RL-340
- Type J and A Test Unit. RL-343
- Time Fluctuations of a Rotary Spark-Gap Modulator. RL-356
- Maximum Allowable Negative Backswing After Pulses. RL-363
- Report on Western Electric 717A Modulator Type D-150442 and Radio-Frequency Unit Type D-150452. RL-425
- Reduction of Radar-Radio Interference from Modulators. RL-431
- Analysis of Condenser Charging in Line Type Modulators, Part I, For Linear Reactor Elements. RL-441
- Model 7, Experimental Hydrogen Thyatron Modulator. RL-485
- Proposed Method for Measuring Instantaneous Magnetron Input Impedance with the Aid of a Delay Network. RL-515
- Pulse Shapes and R-F Spectra for Combinations of Stromberg-Carlson Mark I and Mark II Modulators with 2J22, 2J21, and 725A Magnetrons. RL-518
- A Diode-Type Pulse Voltmeter. RL-521
- Voltage Pulse Rate-of-Rise Measurements. RL-523

CONFIDENTIAL

MODULATORS (Continued)

- Effect on Current Pulse of Resistance in Series with the Magnetron. RL-627
- Model 6 Modulator Performance Tests. RL-619
- A Survey of High-Vacuum Diodes Used for Surge-Limiting Operation in Modulators. RL-580
- Stability of Magnetrons Operated by Spark Gap Modulators. RL-620
- Increasing Stability of Operation of 4J31-35 Magnetrons in the AN/CPS-1 System. RL-621
- Reduction of Power-Line Noise in Modulators. RL-634
- The J-3 Modulator Unit. RL-645-5
- Dissipation in Series Gaps and Voltage-Current Relationships during the Discharge. RL-682-1
- Colloquium on Pulse-Forming Networks, October 12, 1944. RL-692
- The Regulation Obtainable in the Operation of a Hard Tube Modulator with Magnetron Load. RL-697
- Calculation of Pulse-Forming Networks Having Slow Rates of Voltage Rise. RL-698
- Measurements and Waveforms Obtained with SCR-598 Modulator. RL-757
- Analysis of Line Modulator Behavior with a Sparking Magnetron Load. RL-765
- Present Status of High Power at S-Band. RL-793
- R-F Mechanical Modulator for S-Band. RL-798
- Division of Voltage Across Series Spark Gaps in a Line-Type Modulator. RL-682-2
- General Characteristics of Enclosed Spark Gaps with Emphasis on Aluminum Cathode-Type Series Gaps. RL-682-3
- Line-Type Modulator and IIP 10V Magnetron Operation at 6 Megawatts. RL-682-6
- Radiation Laboratory Modulator Summary. RL-829
- Modulator for AN/TPS-10 Radar. RL-997
- AN/APS-30 Modulator Status. RL-1000
- Instruction Manual for R-18 Radar Installation. RL-M-100
- Instruction Manual for Raytheon Service Modulator WX 4002 B. RL-M-100, RL-M-101
- Instruction Manual for Raytheon Laboratory Modulators WX 4054 and WX 4054 A and WX 4054 B. RL-M-103
- Instruction Manual for Experimental Service Modulator Model 4, Type 1372. RL-M-111
- Manual of Operation for Model No. 2 Synchronizer. RL-M-112
- Spectrum Analyzer (Type 103) for Pulsed Oscillator at 3000 Mc. RL-M-115
- Instruction Manual for Pulsed Oscillator, 3000 Mc (Model No. 1). RL-M-117
- Instruction Manual Model P4 Synchronizer. RL-M-118
- Instruction Manual for Revised Model P4 Synchronizer. RL-M-126
- Instruction Manual for Spectrum Analyzer (Type 105) for X-Band Pulsed Oscillators and Spectrum Analyzer (Type 107) for S-Band Pulsed Oscillators. RL-M-127

MODULATORS (Continued)

- Instruction Manual for Service Modulator Model 9. RL-M-131
- Instruction Manual for Model 6-B (MEW) Modulator. RL-M-139
- Instruction Manual for Model 7A Hydrogen Thyatron Modulator. RL-M-145
- Instructions Manual for Model 6 Modulator. RL-M-153
- Instructions for Modifying the SCR-584 Modulator for Use in Aspen Transmitters. RL-M-155A
- Instructions for Modifying the SCR-584 Modulator for Use in Aspen Transmitters. RL-M-155B
- Instruction Manual for Model 17 Modulator. RL-M-187
- Instruction Manual for Model 20 Laboratory Modulator. RL-M-232
- Operating Instructions for Model 12 Modulator. RL-M-239
- Modulator Text, Second Edition. RL-T-15
- General Lecture Series on Radar Components. RL-T-18
- MOVING TARGET INDICATION, see also Clutter
- Radar Detection of Ground Objects from the Ground. RL-420
- The Detection of Moving Targets among Ground Clutter by Coherent Pulse Methods. RL-480
- The Observation of R-F Phase in Pulse Radar. RL-481
- Elimination of Ground Clutter. RL-520
- Pulse Doppler for Detection of Moving Ground Targets. RL-553
- A Moving Target Selector Using Deflection Modulation as a Storage Music. RL-562
- A Precision X Sweep Generator. RL-563
- The Effect of Clutter Fluctuations on MTI. RL-700
- The Storage of Video Signals on Simple Monies. RL-743
- An Experimental MTI System. RL-744
- MTI for MEW. RL-752
- Superionic Delay Lines. RL-850
- Mechanical Computer Mechanism for Moving COHO. RL-900
- Notes on the Contamination of Mercury by Stainless Steel. RL-935
- A Moving COHO Conversion Unit. RL-975
- Dynamic-Range Compression for MTI. RL-1016
- An Experimental S-Band Airborne MTI System. RL-1018
- Preliminary Technical Manual for SCR-584 MTI Modification Kit No. MC-442-AS and Fus Beam Search Antenna. RL-M-218

MULTIVIBRATORS, see Circuits and Networks

NAVIGATION AND MAPPING

- Western Electric D-160448 Input Equipment and Western Electric X-61901 Oscilloscope [BTL]. 14-87
- Long-Range Navigation Equipment, Microwave Committee Project No. 3 [West. E. & M. Co.]. 14-88
- Aircraft Position Indicating Equipment (Receiving) [RCA]. 14-89

CONFIDENTIAL

NAVIGATION AND MAPPING (Continued)

- Instruction Book for Western Electric D-161131 Receiver and Western Electric D-161132 Indicator for a Long-Range Navigation System* [BTL]. 14-91
- Two Morganatt Transmitters for NDRC Project No. 3* [GE]. 14-92
- Development of a Stable Non-Crystal Controlled Oscillator* [U. of Col.]. 14-98
- Crystal Clock Project, Third Progress Report, May 1, 1943* [Bartol]. 14-145
- Interference of Loran Pulses with Radio Telephone and Telegraph Reception* [BTL]. 14-163
- Crystal Clock Project and 10-Kc Oscillator, Progress Report, Aug. 1, 1943* [Bartol]. 14-175
- Airborne Loran Equipment* [GE]. 14-191
- Crystal Clock Project and 10-Kc L-C Oscillator, Progress Report, Oct. 1, 1943* [Bartol]. 14-193
- Lodur Pulse-Direction-Finding Receiver* [RCA]. 14-200
- Development of a Power Supply and Temperature Stabilized Oscillator for the Battery Operated Lodur Receiver* [Emerson Radio and Phonograph]. 14-203
- Characteristics of Simplified Loran Receiving Equipment* [RCA]. 14-206
- Development of Airborne Loran Receiver-Indicator, Model LIIN-1* [RCA]. 14-207
- Development of Loran Receiver Trainer* [RCA]. 14-208
- Crystal Clock Project and 10-Kc L-C Oscillator, Final Report, Jan. 1, 1944* [Bartol]. 14-226
- Simplified Loran Receiving Equipment* [RCA]. 14-228
- A Portable Signal Generator for Loran Receivers* [RCA]. 14-297
- A Converter for 170-Kc Loran Signals* [RCA]. 14-329
- U. S. Radar Survey, Section 4, Navigational Radar* [NDRC]. 14-334
- Special Mechanical Counter for the Mark III or Phase-Shift Loran Indicator* [Int. Business Machines Corp.]. 14-368
- U. S. Radar Survey, Section 4—Navigational Radar, Change 1* [NDRC]. 14-455
- An Improved Type of L-F Loran Transmitter* [RCA]. 14-458
- An Exciter for L-F Loran Transmitter* [RCA]. 14-459
- Development of a Power Output Tube for NDRC Microwave Section Project No. 3, Final Report* [RCA]. 14-471
- H2X Range Unit for Navigation and Bombing*. RL-342
- The Identification of Signals on PPI Photographs for the Construction of Radar Maps*. RL-449
- Elements of Loran*. RL-499
- Precise Navigation by Means of a Radar Map Superposed on the PPI*. RL-503
- SM Radar*. RL-506
- Adjustment of Loran Antennas and Antenna Compiling Units at Frequencies Between 1700 and 2000 Kilocycles*. RL-511

NAVIGATION AND MAPPING (Continued)

- A High Resolution K-Band Ship Search Set*. RL-576
- Simple Computation of Distance on the Earth's Surface*. RL-582
- Low-Altitude Navigation Antennas Developed in Connection with AN/APS-10*. RL-615
- The Future of Hyperbolic Navigation*. RL-625
- A Microfilm Chart Projector for Radar Navigation*. RL-658
- BPX (AN/UPN-3, 4, AN/APN-11) Ultra-Portable X-Band Radar Beacons and Their Tactical Uses*. RL-710
- Fight Behavior of the Flinx Gate and Gyrogon Campanes and Their Effects on GPI*. RL-712
- Micro-JI*. RL-714
- Calculation of Vertical Polar Diagrams and Power Gains of Antennas for Airborne Navigational Radars*. RL-750
- AN/APS-10, a Lightweight X-Band Search Set*. RL-768
- The Radar Chart Projector*. RL-926
- A Discussion of Plotting Devices for PPTs*. RL-1038
- AN/APS-15 Schematics*. RL-M-135, RL-M-135H
- Handbook of Instructions for Radio Set AN/APS-15 (H2X)*. RL-M-1350
- Lightweight Loran Transmitter (LLTX)*. RL-M-158A
- Hacrey 170-T Loran Transmitter Manual*. RL-M-162
- Handbook of Instructions for the Preparation of Maps for the H2X Supersonic Trainer*. RL-M-181
- Handbook of Procedures for Mobile Charting Units, Air Transportable Loran System*. RL-M-183
- Preliminary Instructions for the Manual Bearing Unit*. RL-M-192
- Handbook of Instructions for the Preparation of Mountain Maps for the H2X Supersonic Trainer*. RL-M-205
- Instructions for Installation and Maintenance of Waffle Relief Maps in Ultrasonic Trainers*. RL-M-206
- Handbook of Operating Instructions for Loran Low Frequency Converter CV-27/UPN*. RL-M-222
- Handbook of Maintenance Instructions for Loran Low Frequency Converter CV-27/UPN*. RL-M-225
- Preliminary Handbook of Operating and Maintenance Instructions for Model AN/APA-46 Aircraft Radar Equipment*. RL-M-227
- Hygrograph Instruction Manual*. RL-M-230
- Possible Radar Solutions to the Problem of Accurate Siting of Field Artillery*. RL-S-12
- Radar Photo Reconnaissance*. RL-S-13
- Ground Position Indicator for Radar Navigation and Bombing*. RL-S-19
- Termination Report on Radar Photo Reconnaissance Project*. RL-S-34
- NETWORKS, see Circuits and Networks**
- NIGHT FIGHTING, AERIAL**
- Report on Night Fighting Pursuits*. RL-117
- New Approach Procedure for Night Fighting*. RL-178

CONFIDENTIAL

NOISE FIGHTING (Continued)

- New Method of Noise Fighting* (abridged edition of 178). RL-178a
Statistical Treatment of Certain Phases of Aerial Combat. RL-181
Effect of Routine Evasive Action on the Calculated Approach Procedure. RL-187
Use of the Range Clock in Noise Fighting with AI Equipment. RL-204

NOISE, see also Interference

- Theory of Noise in Conductors, Semi-Conductors, and Crystal Rectifiers* [Purdue]. 14-133
Noise Reduction by Delayed Feed-Back [RCA]. 14-146
Theory of Signal to Noise Ratio of Crystal Mixers [Cornell]. 14-162
Crystal Noise as a Function of DC Bias and 30-Mc Impedance Measured with a Diode Noise Source [Purdue]. 14-167
Noise in Silicon Rectifiers at Low Temperatures [U. of Pa.]. 14-189
On the Distribution of the Average Noise Current in Receivers [Cornell]. 14-305
Note on the Measurement of Noise Temperature [U. of Pa.]. 14-311
Crystal Audio Noise [U. of Pa.]. 14-387
Special Report on Signal-to-Noise Measurements on Receivers. RL-108
Special Report on Capacitive Signal Noise Measurements on Crystal Mixers and Grounded Grid Tube Mixers. RL-110
Noise and the Reception of Pulses. RL-115
Coincidence Method of Noise Reduction. RL-119
Response of a Non-Linear Device to Noise. RL-129
Report of Section VI, March 4, to March 22, 1941. RL-133
Kinetic Derivation of the Thermal Noise Formula. RL-191
Statistics of Circuit Noise. RL-192
Comparison Between Signal and Noise. RL-193
Noise Measurements on Microwave Converters. RL-289
Theory of Noise Measurements on Crystals as Frequency Converters. RL-293
Use of the Temperature-Limited Diode in Measurements of Noise Figures of Crystals. RL-294
Notes on Measurement of Noise, Gain and Noise Figures of Converters. RL-295
Noise Temperature Measuring Apparatus for Crystals as 10,000 to 30 Mcurycle Converters. RL-298
Noise from Local Oscillators. RL-304
Action of Linear Detector on Signals in the Presence of Noise. RL-305
Definition of Maximum Range on Aircraft and Its Quantitative Determination. RL-353
Performance of 3-Cm System (D2-1). RL-355
S/N Measurements on the CV-58. RL-416
Simplified Measurement of Receiver Sensitivities (S-Band Noise Source). RL-443
Theory of Random Processes. RL-454

NOISE (Continued)

- The Detection of Moving Targets among Ground Clutter by Coherent Pulse Methods*. RL-480
Operation of 1N23 Crystal Rectifiers. RL-496
The Effect on Noise Figure of Placing the Gain Control on the First I-F Stage. RL-528
Reduction of Power Line Noise in Modulators. RL-634
A Feedback Circuit for Measuring Output Noise Ratio of Crystal Rectifiers. RL-667
Receiver Noise Figures and Their Measurement. RL-746
Fluctuations in the Return Signal from Random Scatterers. RL-773
Noise Filtering Properties of Third Detectors. RL-833
X-Band Sea-Return Measurements. RL-870
Measurements on Noise from Reflex Oscillators. RL-872
Theory of Noise from the Reflex Oscillator. RL-873
1N23 Noise Measuring Set Type 7438. RL-M-190
1N21 Noise Tester, Type 11044. RL-M-191

NOMENCLATURE, see Circuits and Networks

OSCILLATOR CIRCUITS, see Circuits and Networks

OSCILLOSCOPES, see Test Equipment

PERFORMANCE, see also Airborne Radar Performance, Ground Radar Performance, Shipborne Radar Performance

- Rmfs Systems Reports, August 26, 1941 to September 24, 1941*. RL-40
Comparison of Performance of 10-Cm and 3-Cm Advanced Development Systems. RL-350
Performance of 3-Cm System (D2-1). RL-355
Recent Performance of the 3-Cm Advanced Development System (D2-1). RL-365
Microwave Test Signals. RL-1023
Radar R-F Test Points. RL-S-68
Operation for Peak Performance. RL-S-74

PHOTOGRAPHY

- Advanced Design for Radar Photography* [Fairchild]. 14-563
Photography of Successive Pulse Reflections from a Moving Target. RL-348
Photographs of the PPI Indicator Tube with 3-Cm ASV over Water and Land. RL-381
Photographic Polarization Tests. RL-382
Tokyo H2X Photographs. Comparison of Operational PPI Photographs with PPI Predictions of the Ultrasonic Radar Trainer. RL-715
A Report on ASD-1 B-Scope Photography. RL-439
The Identification of Signals on PPI Photography for the Construction of Radar Maps. RL-449
Comparative Photographs of 1- and 5-Microsecond Signals. RL-492
PPI (Photographic Projection PPI). RL-725
Instruction Manual for Automatic H2X Camera, Model A. RL-M-163
Temporary Instruction Manual for Automatic Radar Camera, Model B. RL-M-164A

CONFIDENTIAL

PHOTOGRAPHY (Continued)

- Temporary Instruction Manual for Automatic H2X Camera, Model B.* RL-M-164B
Radar Photo Reconnaissance. RL-S-13
Termination Report on Radar Photo Reconnaissance Project. RL-S-34
PPI Photographs from AEW. RL-S-51
Type Test of the Fairchild Radar Recording Camera. RL-S-66

PLOTING SYSTEMS, see also Navigation and Mapping

- Semi-Automatic Tactical Plotting Board.* RL-467
The SCR-584 Plotting Table System. RL-595
Additional Modification, Calibration, and Plotting Procedures for RC-294 Plotting Equipment. RL-M-235
Release Point Indicator Used in Conjunction with RC-294. RL-S-47
The Manual Plotting System RC-305. RL-S-62
 PLUMBING, see Transmission Lines and Test Equipment

POLARIZATION

- Relation of Radar Range to Frequency and Polarization.* RL-18
Change of Polarization as means of Gap Filling. RL-19
Microwave Transmission. RL-121
Polarization Effects in a Circular Wave Guide at 3-Cm. RL-162
Radar Target Contrast. RL-375
Photographic Polarization Tests. RL-382
The Depolarization of Microwaves. RL-458
Preliminary Measurements of 10-Cm Reflection Coefficients of Land and Sea at Small Grazing Angles. RL-478
Radome Bulletin Number 8, X-Band Sandwiches at Variable Angles of Incidence. RL-483-8
Radome Bulletin Number 13, Elliptical Polarization Produced by Streamlined Radomes. RL-483-13
Radome Bulletin Number 16, Some Electrical Aspects of Microwave Sandwich Radome Design. RL-483-16
X-Band Horizontally Polarized Non-Directional Antennas. RL-489
S-Band Horizontally Polarized Non-Directional Antennas. RL-517
Polarization Studies at S and X Frequencies. RL-536
S-Band Vertically Polarized Non-Directional Antennas. RL-423
Over-Water Tests of S-Band Early Warning for Ships. Vertical Coverage of the CXHR (SCI) Search System. RL-703
Altitude Return in the AN/APS-6. RL-706
Broad-Band Antenna for Circular Polarization. RL-769
Normal Firing K-Band Array with Transverse Polarization. RL-771
Beacon Tests with AN/APS-6. RL-S-16
Flight Tests on AN/APS-6A. RL-S-25

POTENTIOMETERS

- Plan Position Indicator Using a Sinusoidal Potentiometer.* RL-312
Linearity of Standard Wire-Wound Volume-Control-Type Potentiometers. RL-313
Specification of Performance Tests for PPI Sinusoidal Potentiometers Types RL10E and RL14. RL-316
Present Status of Potentiometer Projects in the Radiation Laboratory. RL-318
Potentiometer Type RL-B for Azimuth and Elevation Indication on Magnetically Deflected Cathode Ray Tubes. RL-409
Sinusoidal Potentiometers Types RL10CB, RL10CD, RL10E, and RL14. RL-423
Sinusoidal Potentiometers Types RL11, RL15, RL204. RL-459
Matching Resistances Curves by Means of Two Linear Gang Potentiometers and a Three-Terminal Resistance Network. RL-616
Life Test of Contact Material on Standard Linear Wire-Wound Potentiometers. RL-617
The RL 270 Series of Precision Potentiometers. RL-864
Sine Potentiometer Tester. RL-940

POWER EQUIPMENT AND POWER SUPPLIES

- Investigation of Power Supply Requirements as a Function of Future Radar Circuit Developments [NDRC].* 14-134
Power Supply for Air-Borne Radar Equipment [NDRC]. 14-135
Analysis of Commutation of Direct Current Machines at High Altitudes, Nov. 28, 1942 [NDRC]. 14-136
Simulated High-Altitude Brush Testing Equipment [NDRC]. 14-137
Analysis of Commutation of Direct Current Machines at High Altitudes, Apr. 15, 1943 [NDRC]. 14-139
Development of a Power Supply and Temperature Stabilized Oscillator for the Battery Operated Radar Receiver [Emerson Radio and Phonograph]. 14-203
Development of Three-Phase Aircraft Alternator [Leland Electric Co.]. 14-287
Technical Report of Research Work Conducted at Metal Powder Laboratory [Stevens]. 14-313
Construction of EMF's of Dry Batteries (B1) [Cornell]. 14-537
Thyrite Bridge Controlled Voltage Regulator. RL-525
Wave Form Analysis. RL-561
Stabilized High Voltage Supply. RL-565
Nonlinear Networks as Voltage Regulators. RL-711
Electronic Line Voltage Stabilizers. RL-1042
General Lecture Series on Radar Components. RL-T-18

PRESSURIZATION

- X-Band Low-Pressure Tests.* RL-241
X-Band Measurements at Low Pressures. RL-250

CONFIDENTIAL

PRESSURIZATION (Continued)

- The Cooling of Pressure Tight Containers. RL-462
Present Status of High Power at S-Band. RL-793

PROGRESS REPORTS, see General Progress Reports

PROPAGATION

General Propagation

- Propagation of 10-Centimeter Waves on a 52-Mile
Optical Path Over Land. The Correlation of
Signal Patterns with Radiosonde Data [Wash-
ington State College]. 14-151
Radiotelephone Communication on 3000 Megacycles
[Washington State College]. 14-152
Propagation of Signals on 45.1, 474, and 2800 Mc
from Empire State Building to Hauppauge and
Riverhead, Long Island, July 20, 1943 [RCA].
14-173
The Propagation of 10-Centimeter Waves over
Land Paths of 14, 52, and 112 Miles [Washing-
ton State College]. 14-202
Propagation of 10-Centimeter Waves over an In-
land Lake. Correlated with Meteorological
Sounding [Washington State College]. 14-212
Propagation of Signals on 45.1, 474, and 2800 Mc
from Empire State Building to Hauppauge and
Riverhead, Long Island, New York, July 31, 1944
[RCA]. 14-298
Rotational Line Width in the Absorption Spectrum
of Atmospheric Water Vapor [U. of Mich.].
14-320
Magnetrons for Production of Centimeter Wave-
length Radiation, also Absorption of Such Radia-
tion in Water Vapor [CRL]. 14-588
Microwave Interference Patterns. RL-13
Transmission on 3,000 Mc over Sea Water. RL-14
Transmission on 100 Mc over Sea Water. RL-15
Transmission on 200 Mc over Sea Water. RL-16
Transmission on 500 Mc over Sea Water. RL-17
Change of Polarization as Means of Gap Filling.
RL-19
Properties of the Diffracted Wave Field Intensity.
RL-20
Radar Height Finding. RL-21
Transmission at Low Altitudes over Sea Water.
RL-22
Field Intensity Formulas. RL-23
Consideration Affecting Choice of Wavelength.
RL-120
Microwave Transmission. RL-121
Atmospheric Absorption of Microwaves. RL-175
General Relations Determining the Range of a
Radar System. RL-186
An Introduction to Microwave Propagation.
RL-466
The Effect of Atmospheric Refraction on Short
Radio Waves. RL-447
Simplified Methods of Field Intensity Calculations
in the Interference Region. RL-461
Propagation over Short Paths and Rough Terrain
at 200 Mc/s. RL-468

PROPAGATION (Continued)

- Preliminary Measurements of 10-Cm Reflection Co-
efficients of Land and Sea at Small Grazing
Angles. RL-478
Radome Bulletin Number 4, Transmission and Re-
flection of Single Plane Sheets. RL-483-4
Radome Bulletin Number 11, Electrical Properties
of Double-Wall and Sandwich Radomes.
RL-483-11
Radome Bulletin Number 12, Transmission and Re-
flection of Parallel Plane Sheets. RL-483-12
Radome Bulletin Number 16, Some Electrical
Aspects of Microwave Sandwich Radome Design.
RL-483-16
Observations on Signal Stability at S and X fre-
quencies. RL-537
Nomograms for Computation of Modified Index of
Refraction. RL-551
Further Measurements of 3- and 10-Cm Reflection
Coefficients of Sea Water at Small Grazing
Angles. RL-568
Preliminary Report on the Fluctuations of Radar
Signals. RL-569
Vice X. RL-607
Dielectric Properties of Water and Ice at K-Band.
RL-644
Over-Water Transmission Measurements, 1944.
Part I, Preliminary Analysis of Radio and Radar
Measurements. RL-649
Further Theoretical Investigations on the Atmos-
pheric Absorption of Microwaves. RL-664
Theory of Characteristic Funnelons in Problems of
Anomalous Propagation. RL-686
The Absorption of One-Half Centimeter Electro-
magnetic Waves in Oxygen. RL-684
Field Intensity Contours in Generalized Coordi-
nates. RL-702
Over-Water Tests of S-Band Early Warning for
Ships. Vertical Coverage of the CXHR (SCI)
Search System. RL-763
Altitude Return in the AN/APS-6. RL-766
Surface Coverage of Some Shipborne Radar Sets
on S, X, and K Bands. RL-726
An Aerial Investigation of K-Band Radar Per-
formance under Tropical Atmospheric Condi-
tions. RL-729
The Relation Between Absorption and the Fre-
quency Dependence of Refraction. RL-735
Range-Altitude Coverages of Shipborne Microwave
Search Radars. RL-741
Fluctuations in the Return Signals from Random
Scatterers. RL-773
Effects of Clouds and Rain on K-Band Airborne
Radar. RL-786
Methods of Calculating Characteristic Values for
Bilinear M-Curves. RL-795
Graphs for Computing the Diffraction Field with
Standard and Superstandard Refraction. RL-799
Propagation in an Atmosphere Containing a Dis-
continuity in the Index of Refraction. RL-949

CONFIDENTIAL

PROPAGATION (Continued)

- The Absorption of Atmospheric Water-Vapor in the K-Band Region.* RL-1002
A Procedure for Statistical Analysis of Depth Soundings. RL-S-21
General Lecture Series on Radar Components. RL-T-18

Meteorology

- The Captive Radiosonde and Wired Sonda Techniques for Detailed Low-Level Meteorological Sounding (Washington State College).* 14-192
X-Band Low Pressure Tests. RL-241
X-Band Measurements at Low Pressure. RL-250
Radar Echoes from Atmospheric Phenomena. RL-172

- Climate in Relation to Microwave Radar Propagation in Panama.* RL-476
Instructions and Methods for Measuring Temperature and Humidity in the Lower Atmosphere. RL-487

- Qualitative Survey of Meteorological Factors Affecting Microwave Propagation.* RL-488
Microwave Transmission over Water and Land under Various Meteorological Conditions. RL-547

- Measurements of the Attenuation of K-Band Waves by Rain.* RL-603
Over-Water Transmission Measurements, 1944. RL-603
Part I, Preliminary Analysis of Radio and Radar Measurements. RL-640
Radar Echoes from Precipitation Layers. RL-680

Targets

- Relation of Radar Range to Frequency and Polarization.* RL-18
Radar Echoes from Periscopes. RL-171
Radar Echoes from Atmospheric Phenomena. RL-173

- Microwave Radar Reflections.* RL-195
Possible Measurement of Radar Echoes by Use of Model Targets. RL-196
Synthesis of Microwave Diffraction Patterns with Application to Cas² Patterns. RL-272

- Comparison of Reflectivities of Approximately Similar Plastic and Metal Airplanes.* RL-384
Tests on Radar Echoes from Cylinders. RL-378
Over-Water Observations at X and S Frequencies on Surface Targets. RL-401

- On the Fluctuations in Signals Returned by Many Independently Moving Scatterers.* RL-465
On the Appearance of the A-Scopes When the Pulse Travels Through a Homogeneous Distribution of Scatterers. RL-466

- Reflections from Smooth Curved Surfaces.* RL-661
Theory of Radar Return from the Schnorkel. RL-671

- Radar Echoes from Precipitation Layers.* RL-689
Fluctuations of Radar Echoes. RL-700
A Theoretical Treatment of Radar Target Return. RL-719
Echoes from Tropical Rain on X-Band Airborne Radar. RL-728

PROPAGATION (Continued)

- Effects of Clouds and Rain on K-Band Airborne Radar.* RL-780

- A Theoretical and Experimental Study of Radar Ground Return.* RL-1024

- A Theoretical Treatment of Radar Target Return, Part II.* RL-1049

- The So-Called Standard Target.* RL-S-43

- Paraboloid Diffraction Patterns from the Standpoint of Physical Optics.* RL-T-7

- PROPELLER MODULATION, see also Absorbent Materials, Dielectrics, and IFF**

- Modulation of Radar Signals from Airplanes.* RL-914
Preliminary Maintenance and Operating Instructions for AN/APX-15. RL-M-200

- Detection of Propeller and Samba Modulations.* RL-S-10

PULSE LENGTH AND RATE, SHAPE

- Comparative Photographs of 1- and 5-Microsecond Signals.* RL-492

- Pulse-Length Discrimination in Beacons.* RL-510
Voltage Pulse Rate-of-Rise Measurements. RL-523

- Effect of Pulse Length on System Performance and Operation.* RL-571

- Effects of Line and Cathode-Follower Terminations on Pulse Shape.* RL-616

- Experiments in Microwaves Breakdown.* RL-731
Short Pulse Techniques for High Definition Radar Systems. RL-912

- Pulse Length Selector and Multiple Pulse Decoder.* RL-917

PULSE TRANSFORMERS, see also Transformers

- Pulse Transformers, Final Report (Utah Radio).* 14-447

- Leakage Inductance and Distributed Capacitance of Various Types of Pulse Transformer Windings.* RL-463

- Pulse Transformer Core Material Measurements.* RL-470

- Colloquium on Pulse Transformer Design, November 3-4, 1943.* RL-498

- Pulse Transformers Designed at Radiation Laboratory and Produced by General Electric Company and Westinghouse Electric and Manufacturing Company.* RL-513

- High-Ambient Life Test of an Oil-Filled Pulse Transformer.* RL-514

- The Evaluation of an Equivalent Circuit for a Pulse Transformer.* RL-545

- Analysis of the Influence of Pulse Transformers on Current Pulse Shape.* RL-546

- A Method of Virtual Displacements for Electrical Systems with Applications to Pulse Transformers.* RL-618

- Energy Loss in Copper under Pulse Conditions.* RL-619

- Influences of Pulse Transformer Design on 4J31-35 Magnetron Stability.* RL-622

- Equivalent Circuit of a Pulse Transformer Core.* RL-666

CONFIDENTIAL

PULSE TRANSFORMERS (Continued)

- Pulse Transformer Committee Standard Test Methods for Pulse Transformer Cores.* RL-722
Equivalent Network for the 232-KW Pulse Transformer Based on the Method of Virtual Displacements. RL-734
Pulse Transformer Committee, Proposed Basic Specifications for Pulse Transformers. RL-881
Radiation Laboratory Pulse Transformer Designs. RL-882

RADAR COUNTERMEASURES (RCM), see Countermeasures
 RADIO-FREQUENCY HEADS, see R-F Heads

RADOMES

- Design and Test of Project Eagle Airfoil (Douglas).* 14-290
Special Report on Transmission Characteristics of Suggested Airplane Nose Materials. RL-144
Design Characteristics of Spinner Housing Materials. RL-215
Radome Bulletin Number 1. RL-483-1
Radome Bulletin Number 2, An Outline of the Electrical Properties of Radomes. RL-483-2
Radome Bulletin Number 3, Ice Formation on Shipborne Radomes. RL-483-3
Radome Bulletin Number 4, Transmission and Reflection of Single Plane Sheets. RL-483-4
Radome Bulletin Number 5, Recent Dielectric Constant and Loss Tangent Measurements. RL-483-5
Radome Bulletin Number 6, Radomes and System Performance. RL-483-6
Radome Bulletin, Number 7, The Measurement of High Reflections at Low Power. RL-483-7
Radome Bulletin Number 8, X-Band Sandwiches at Variable Angles of Incidence. RL-483-8
Radome Bulletin Number 9, The Matching of High Standing Wave Ratios. RL-483-9
Radome Bulletin Number 10, The Measurement of Small Reflections. RL-483-10
Radome Bulletin Number 11, Electrical Properties of Double-Wall and Sandwich Radomes. RL-483-11
Radome Bulletin Number 12, Transmission and Reflection of Parallel Plane Sheets. RL-483-12
Radome Bulletin Number 13, Elliptical Polarization Produced by Streamlined Radomes. RL-483-13
Radome Bulletin Number 14, An Investigation of R-F Probes. RL-483-14
Radome Bulletin Number 15, The Measurement of Dielectric Constants in the One-Centimeter Band. RL-483-15
Radome Bulletin Number 16, Some Electrical Aspects of Microwave Sandwich Radome Design. RL-483-16
Radome Bulletin Number 17, Current Progress on R-F Research. RL-483-17
Radome Bulletin Number 18, The Dependence of Magnetron Pulling on Radome Shape and Orientation. RL-483-18
Radome Bulletin Number 19, Dielectric Constant and Loss Tangent Computation. RL-483-19
Radome Wall Reflections at Variable Angles of Incidence. RL-483-20

RADOMES (Continued)

- Transmission of Lossy Sandwiches.* RL-483-22
Dielectric Constants and Loss Tangents of Radome Materials. RL-483-25
Electrical Test Methods for Radomes. RL-483-26
 RANGE, see also Propagation
Range Tracking Circuit with Position Memory (Cornell). 14-160
Range Tracking Circuit with Velocity Memory (Cornell). 14-161
Reports of Tests on Resonant Range Follow-Up System (Fairchild). 14-240
Government Radar Patent Program, Technical Report No. 2—Precise Range Measurement and Tracking (NDRU). 14-339
Errors in Range Measurement with a Circular Sweep. RL-9
Relation of Radar Range to Frequency and Polarization. RL-18
Consideration Affecting Choice of Wavelength. RL-120
Scattering of 10-Cm Radiation by a Model Airplane. RL-150
Radar Echoes from Periscopes. RL-171
Atmospheric Absorption of Microwaves. RL-175
General Relations Determining the Range of a Radar System. RL-186
Microwave Radar Reflections. RL-195
Possible Measurement of Radar Echoes by Use of Model Targets. RL-196
Precision Timing Calibrator and Range Measuring System. RL-319
Precision Delay Multivibrator for Range Measuring System. RL-320
Medium Precision Self-Synchronous Range Circuit Model 4. RL-321
Circular Sweep Precision Range System Model 4. RL-322
Medium Precision, Self-Synchronous Automatic Range Tracking Circuit. RL-323
Photoelectric Automatic Range Tracking Unit. RL-324
Simplified Circular-Sweep Range System. RL-325
Antiaircraft Artillery Board Test on the Simplified Circular Sweep Range. RL-326
Hand Radar Ranging Circuit. RL-327
Errors in Circular Sweep Due to Decentering and Ellipticity of Circle. RL-328
Line Controlled Blocking Oscillator Marker Generator A.R.O. Calibrator. RL-330
A.R.O. Range Follow-up Unit. RL-331
A.R.O. Range Unit. RL-332
Model H Calibrator. RL-333
Delayed Sweep for SCR-582-X. RL-337
A Condenser Phase Shifter Range Circuit with Sine Wave Tracking Suitable for Microwave Height Finding Stations. RL-339
Pulsed Oscillator and Phase Shifter. RL-340
Automatic Range and Azimuth Tracking While Scanning. RL-341

CONFIDENTIAL

RANGE (Continued)

- H2X Range Unit for Navigation and Bombing.* RL-342
Type J and A Test Unit. RL-343
Definition of Maximum Range on Aircraft and Its Quantitative Determination. RL-353
Tests on Radar Echoes from Cylinders. RL-378
Survey of 10-Cm Radar Installation in PBM-1 Flying Boat. RL-383
Comparison of Reflectivities of Approximately Similar Plastic and Metal Airplanes. RL-384
An Introduction to Microwave Propagation. RL-400
Range Height Indicator. RL-418
The Range Calculator. RL-497
A Condenser Phase Shifter Range Unit with Sine Wave Tracking for AN/TPG-1, AN/TPG-1, SCR-698. RL-516
A Range-Measuring System Using an RC Linear Sweep. RL-540
A Precision Self-Synchronous Range System for P-1. RL-573
Medium Precision Range System for CXGQ (Project Henry). RL-579
Siting and Range of Microwave Beacons. RL-590
A "Range Only" Set for "Close-In Siting." RL-598
Comparison of Theoretical and Experimental Requirements for Microwave Beacon Transmitter Power and Receiver Sensitivity. RL-627
Vertical Coverage of a 1½-Ft x 5-Ft Antenna Designed for SG-3 (Experimental Data Obtained with an SNR Aircraft as Target). RL-630
A/R Range Scope. RL-755
AN/APG-21 (Terry). RL-794
Range Accuracy of AN/APG-5 (ARO). RL-820
Range and Tracking Accuracy of AN/APG-15B. RL-875
Falcon System Manual. RL-M-152A
AN/APG-13 Falcon System Manual. RL-M-152B
AN/APG-13 System Manual. RL-M-152C
Operating Instructions for Sweep Calibrator, Model B. RL-M-188
General Description, Special Installation Requirements, and Mounting Dimensions of AN/APG-5 (ARO) Airborne Range Only Equipment. RL-8-6
Preliminary Report on Single Aircraft Target Ranges of AEW. RL-8-37
Radar Components that Affect Range. RL-8-73

RANGE TABLES, see Bombing and Ballistics

RCM, see Countermeasures

RECEIVERS, see also Amplifiers

- Aircraft Position Indicating Equipment (Receiving) [RCA].* 14-89
Instruction Book for Western Electric D-161131 Receiver and Western Electric D-161132 Indicator for a Long Range Navigation System [BTL]. 14-91
Radar Pulse-Direction-Finding Receiver [RCA]. 14-200
The AGL Receiver [GE]. 14-275
On the Distribution of the Average Noise Current in Receivers [Cornell]. 14-305

RECEIVERS (Continued)

- A 3,000-Mc Receiver Using Velocity Modulation Tubes Type ZP-439, Final Report [GE].* 14-432
Magnetrons and Detector Beat-Oscillator Receivers with Record of Material Furnished [BTL]. 14-450
Roof System Report, Initial Development, Feb. 15 to Apr. 1, 1941. RL-37
Receivers, Dec. 2, 1940. RL-100
Receivers, Dec. 20, 1940. RL-101
Receivers and T-R Boxes, Feb. 4, 1941. RL-102
Receivers, T-R Boxes, Measurements, Feb. 4-Mar. 28, 1941. RL-103
Receivers, Aug. 1, 1941. RL-104
Visit to the Bell Telephone Laboratories. RL-105
Special Report on Receivers, June 24, 1941. RL-106
Special Report on Tuning Indicators and Automatic Tuning Systems. RL-107
Spread Report on Signal-to-Noise Measurements on Receivers, Sept. 29, 1941. RL-108
Noise and the Reception of Pulses. RL-115
Ideal Frequency Response of a Receiver for Square Pulses. RL-125
Response of a Non-Linear Device to Noise. RL-129
Conference on Standardization of Intermediate Frequency. RL-283
Preliminary Report on a 10-Cm Super-Regenerative Receiver. RL-284
Impulse and Square-Pulse Response of Various Filters. RL-285
A 30-Mc Schering Bridge. RL-301
A Video Delay Line. RL-302
Action of Linear Detector on Signals in the Presence of Noise. RL-305
The Radiation Laboratory S-Band Amplifier, (Preliminary Report). RL-306
A 70-Mc Wide IF Amplifier. RL-307
Low-Level Crystal Detectors, Effect of Heat and Cold. RL-440
Simplified Measurement of Receiver Sensitivities (S-Band Noise Source). RL-443
Shielding of Microwave Receivers Against Interference at Intermediate Frequencies. RL-471
Lighthouse Tube Superregenerative Receivers. RL-484
A 60-Mc Parallel Schering Bridge. RL-558
Comparison of Theoretical and Experimental Requirements for Microwave Beacon Transmitter Power and Receiver Sensitivity. RL-627
Crystal Detectors and the Crystal-Video Receiver. RL-638
Low Noise Replacement Preamplifier for the SCR-584 (HC-1408). RL-699
Synthetic Radar Echoes in the Presence of Jamming. RL-708
A Wide-Excursion Frequency-Modulated Alignment Oscillator or Wobbulator. RL-738
Receiver Noise Figures and Their Measurement. RL-746
An Electronic Frequency Stabilization System for CW Microwave Oscillators. RL-815

CONFIDENTIAL

RECEIVERS (Continued)

- Detector Cancellation Error as a Function of Carrier Frequency.* RL-859
Distortion in X-Band Detectors. RL-956
Notes on MTI Receivers. RL-1010
Intermediate Frequency Amplifier Oscillator Characteristics. RL-1032
Instruction Manual for H-18 Radar Installation. RL-M-100
Instruction Manual for H-18 Receiver (Included in M-100). RL-M-105
Operating Instructions for the Model 417 Klytroc for Use as a Local Oscillator in Radar Receivers. RL-M-108
AN/AP-15 Receiver-Indicator Modified for Ground Range Sweep and Remote Amplifier. RL-M-172A
Handbook of Operating Instructions for Loran Low Frequency Converter CV-27/UPN. RL-M-222
Handbook of Maintenance Instructions for Loran Low Frequency Converter CV-27/UPN. RL-M-225
Some General Microwave Anti-Jam Design Considerations and Performance of a Special Receiver. RL-S-8
Anti-clutter Circuits for AEW. RL-S-52
General Lecture Series on Radar Components. RL-T-18

REFERENCE (Bibliographies, Nomenclature, Tables, etc.)

- Index of Division 14, NDRC Reports, Other than Radiation Laboratory Reports [NDRC].* 14-250
Division 14 Contract List, June 1, 1944 [NDRC]. 14-270
U. S. Radar Survey, Section 7—Nomenclature Index [NDRC]. 14-393
U. S. Radar Survey, Section 7—Nomenclature Index, Chapter 1 [NDRC]. 14-574
Index of Division 14, NDRC, Reports, other than Radiation Laboratory Reports, First Supplement [NDRC], Mar. 1, 1940. 14-583
Index of Regular Reports, Treats, and Manuals, January 1944. RL-400
Frequency-Wavelength Conversion Tables. RL-652
Continuation of Index of Regular Reports, Special Reports, Manuals, and Treats, Nov. 12, 1944. RL-800
Continuation of Index of Regular Reports, Special Reports, Manuals and Treats, Mar. 7, 1945. RL-1083
Glossary of Terms Used in Connection with Radiation Laboratory Radar. RL-M-144
Tables of Fourier Transforms of Fourier Series, Power Series, and Polynomials. RL-S-58

RELAY RADAR

- Report of Radio Relaying of Radar Signals [NBC-RCA].* 14-243
A Method for Relay Radar PPI Synchronization. RL-505
Flight Tests of Block I Relay Radar System. RL-727
Flight Tests of AEW Block III Relay Link. RL-739
AEW Block III Relay Antenna. RL-845

RELAY RADAR (Continued)

- An X-Band Frequency Modulated Relay System for Video Frequencies.* RL-977
A Synchronization System for Ground Radar Relay. RL-978
Preliminary Technical Manual for AEW. RL-M-180A
Preliminary Book of Maintenance Instructions for Shipboard Components of AEW. RL-M-229
AEW, Airborne Early Warning. RL-S-26
AEW, Airborne Early Warning (RL-S-26 plus additional material). RL-S-27
AEW Bedford Trials. RL-S-32
Tactical Use of Delayed PPI Scopes of the AEW System. RL-S-36
Preliminary Report on Single Aircraft Target Ranges of AEW. RL-S-37
PPI Photographs from AEW. RL-S-51
Anti-Clutter Circuits for AEW. RL-S-52

REMOTE INDICATION AND CONTROL SYSTEMS (Data Transmission servos, synchros, etc.)

- Synchro Test Equipment and Test Procedure.* RL-434
Amplidyne Servo for SCR-598 Surface Fire Control Set. RL-435
A One Tube, One-Supply Servo-Synchronizer. RL-448
Tests on a Motor Oil Gear and an Amplidyne Servo for the SCR-598 Control Problem. RL-404
Semi-Automatic Tactical Plotting Board. RL-407
Remote Position Control by Direct Frequency Variation. RL-482
Results of Tests Performed on "Synchro" Units and Systems. RL-490
A Hard Tube Servo Amplifier for Fractional Horsepower DC Motors. RL-535
Servos with Torque Saturation Part I. RL-555
Servos with Torque Saturation Part II. RL-592
The SCR-598 Plotting Table System. RL-595
QA-2H Servo Adapter. RL-645-1
Q1-2 and Q-3 Servo Amplifier. RL-645-2
S-2, S-2H, S-4, S-4B Motor Control Units. RL-645-10
The S-5 and S-5H Motor Control Units. RL-645-11
Data Smoothing. RL-673
On Servos with Palard Error Data. RL-721
Two Proposed Methods of Erroring the Position of a Moving Link Crib. RL-730
Synchro Units and Their Characteristics. RL-740
Alignment Procedure for Cadillac Airborne Synchro System. RL-M-220
Servo Generator Life Tests. RL-S-11

R-F HEADS

- The K-Band R-F Head, Type No. 3, Navy Model RT-63/APS, British Model 110 DH/206, Instruction Book No. 77 [Sylvania].* 14-495
Development and Production of 50 K-Band R-F Heads [Sylvania]. 14-496
Lighthouse Tube Transmitter-Receiver LHTR Mk I. RL-429
Final Report on SMTR. RL-559
A "Range Only" Set for "Close-In Seeing." RL-598

CONFIDENTIAL

R-F HEADS (Continued)

- G. E. GL2C40 Tont Grid Lighthouse Tubes. RL-600
 AN/APS-31/33 R-F Unit. RL-880
 AN/APQ-34 R-F Head. RL-888
 AN/TPS-10B R-F Head Termination Report. RL-889
 Improved R-F System for the Transmitter-Receiver Unit of the APQ-13. RL-905
 One Kink Tumble X-Band R-F Head. RL-1019
 Manual for Fighter Tail-Warning Equipment. RL-M-138
 Replacement Pressurized R-F Unit for AN/APS-15A. RL-M-210

SCANNING, see also Antennas and Indicators

- AIA-1 Scanner Development Program Completion Report [Dalmo Victor]. 14-199
 Two Motor-Driven Gun Turrets [GE]. 14-230
 Design of "Egg Beater" Scanning Antenna for the Eagle Radar Bombight and Construction of a Model [Int. Projector Corp.]. 14-312
 AIA-1 Scanner Development Program, Progress Report, Aug. 14, 1944 [Dalmo Victor]. 14-321
 Radar Scanner Development Program, Progress Report, Sept. 30, 1944 [Dalmo Victor]. 14-301
 Precision Aircraft Scanners [GE]. 14-410
 Radar Scanner Development Program, Progress Report, Dec. 30, 1944 [Dalmo Victor]. 14-418
 Radar Scanner Development Program, Progress Report, Jan. 12, 1945 [Dalmo Victor]. 14-419
 Final Report on HSK Roll Stabilized Scanner [Maguire Industries Inc.]. 14-429
 Radar Scanning Unit, Final Report [Chrysler]. 14-506
 Radar Rotating Antenna Spiral Scanning Units, Balance and Adjustment [Chrysler]. 14-573
 On Conical Scanning. RL-31
 Correction of the Scanning of Shipborne Radar Systems for Roll and Pitch of the Ship. RL-126
 Report of Section VI, Mar. 4—Mar. 22, 1941. RL-133
 Rapid Scanning, High Revolution Antennas Preliminary Report. RL-265
 Report of Conference on Rapid Scanning. RL-275
 Automatic Range and Azimuth Tracking While Scanning. RL-341
 Conical Scanning. RL-367
 The Balancing of Spiral-Scan Spinners. RL-380
 Development of a Flexible Relay Servomechanism and Application to Sector Scanning Spinner Controls. RL-386
 Laboratory and Field Tests with Stabilized Spinners. RL-395
 Search Scans and System Performance. RL-407
 A One-Tube, One-Selsyn Sector-Scanner. RL-448
 Leaky Waveguide Rapid Scanner. RL-557
 Linear Electrical Scanner. RL-635
 Parallel Plate Option for Electrical Scanning. RL-046
 The SCI Rapid Scan Height-Finding Antenna. RL-688
 Stable Scanners and Unsteady Airplanes. RL-701
 Test of a Type C Data Presentation with a Spiral-Scan Aircraft-Interception System. RL-767

SCANNING (Continued)

- Mechanical Resonant Scanner. RL-782
 K-Band Rapid Scan. RL-960
 Survey of Foster Scanner Developments. RL-1074
 Preliminary Testing of the Houston Corporation AN/APS-10 Scanner. RL-S-33
 Mechanical and Electrical Tests of the General Electric Company Scanner for the AN/APS-10 System. RL-S-61
 General Lecture Series on Radar Components. RL-T-18

SELSYNS, SERVOS, SYNCHROS, see also Remote Indication and Control Systems

- Final Report, Including the Design of Stroking Motor for a Hydraulic Servomechanism [MIT]. 14-279
 Special Report on Data Transmission by Means of Selsyns. RL-6
 Selsyn. RL-12
 Thyatron Servo Control Circuit for Spinners. RL-31
 Production Sources of Self-Synchronous Units. RL-292
 Servomechanism. RL-372
 Development of a Flexible Relay Servomechanism and Application to Sector Scanning Spinner Controls. RL-386
 Geared Selsyns. RL-388
 Parallel "T" Stabilizing Networks for AC Servos. RL-811
 Results of Tests Performed on Synchro Units and Systems. RL-921
 Description and Method of Operation of the Special Synchro Test Bench and Synchro Testing Procedures. RL-922
 A Displacement or Velocity Servo Amplifier. RL-1015
 Analysis of an Amplidyne Servomechanism. RL-T-4

SHEPHERD TUBES, see Tubes, Velocity-Modulated

SHIPBORNE RADAR, see also Bearings, Fire Control Systems, and Navigation and Mapping

Components

- Motor Torpedo Boat (M.T.B.) Computing Radar Sight for Blind, Semi-Blind and Visual Fire [Sperry]. 14-392
 Radar Scanning Unit, Final Report [Chrysler]. 14-506
 RASD Stable Element, Final Report [GE]. 14-567
 Radar Rotating Antenna Spiral Scanning Units, Balance and Adjustment [Chrysler]. 14-573
 Correction of the Scanning of Shipborne Radar Systems for Roll and Pitch of the Ship. RL-126
 Project Dolphin. RL-385
 A Shipborne Mechanical Rotation Plan Position Indicator. RL-315
 SG-1 Antenna Mark 2. RL-639
 SU-2 Antenna, Shipborne Stabilized Radar Antenna for Sea Search. RL-659
 SU-2 Antenna, Line-of-Sight Stabilization of a Radar Beam by Reflector Tilt. RL-060
 Stabilized SG-3 Antenna. RL-065

CONFIDENTIAL

SHIPBORNE RADAR (Continued)

The SCI Rapid-Scan Height-Finding Antenna.

RL-688

Shipborne Black Maria Antennas.

RL-796

Mark 56 T Chronograph.

RL-805

Ship Ring Assembly for the MK 56X System.

RL-877

Headhooks

Comprehensive Report on USS Seawar Radar Installation.

RL-393

Radar Beacon—Mark I Mod 1.

RL-M-167

Handbook of Maintenance Instructions for CXGQ Radar Set.

RL-M-168

Preliminary Instructions for the Manual Bearing Unit.

RL-M-192

CXHR Maintenance Manual.

RL-M-224

Preliminary Book of Maintenance Instructions for Shipboard Components of AEW.

RL-M-229

Preliminary Instructions for Radar System MK 55.

RL-M-246

Preliminary Description of the MK 56 Gun Fire Control System.

RL-M-242

Performance

Report of Operation USS Seawar.

RL-38

Regular Report on the USS Seawar 3,000-Mc Operations.

RL-50

Regular Report on the USS Seawar 3,000-Mc Operations.

RL-51

Regular Report on the USS Seawar 3,000-Mc Operations.

RL-52

Analysis of Firing Tests on Mark 51, Dawn Neck, Virginia.

RL-371

Vertical Coverage of a 1½-Ft by 5-Ft Antenna Designed for SG-3 (Experimental Data Obtained with an SNB Aircraft as Target).

RL-636

Over-Water Tests of S-Band Early Warning for Ships. Vertical Coverage of the CXHR (SCI) Search System.

RL-703

Surface Coverage of Some Shipborne Radar Sets on S, X, and K Bands.

RL-720

Range Altitude Coverages of Shipborne Microwave Search Radars.

RL-741

Echo Box Techniques for Testing S-Band Shipborne Radars.

RL-M-146

AEW Tactical Tests at Brigantine.

RL-S-50

Systems and Attachments

U. S. Radar Survey, Section 2—Shipborne Radar [INDRC].

14-332

Development of Gun Fire Control System Mark 56, Final Report [GE].

14-497

Components of CXHR (SCI) Equipment, Final Report [GE].

14-507

Third General Report on Section Activities, May 14—Nov. 14, 1941.

RL-5

Roof System Report, Initial Development.

RL-37

Navy Roof, etc.

RL-39

Roof Systems Reports, Aug. 26—Sept. 24, 1941.

RL-40

SA Radar.

RL-506

A High Resolution K-Band Ship Search Set.

RL-576

SHIPBORNE RADAR (Continued)

Anti-Aircraft Target Designation Equipment for Ships.

RL-446

The AEW System, Book II, Shipboard Equipment.

RL-806-2

A Navigational Radar for Naval Auxiliaries and Merchant Marine.

RL-876

A High Resolution Set.

RL-S-5

MTB Computing Radar Sight.

RL-S-14

SIGHTS, see Fire Control Systems

SIGNAL GENERATORS, see Test Equipment

SITING, see also Ground Radar

Siting and Range of Microwave Beacons.

RL-590

Possible Radar Solutions to the Problem of Accurate Siting of Field Artillery.

RL-S-12

SPARK GAPS, see Modulators and Tubes

SPECTRUM ANALYZERS, see Test Equipment

STABILIZATION, FREQUENCY, see Cavities, Magnelrons, Power Equipment and Power Supplies, Tubes, etc.

STABILIZATION, MECHANICAL

Device for Determination of the Vertical by Means of Cosmic Rays [Correll].

14-363

Final Report on H2K Roll Stabilized Scanner [Maguire Industries Inc.].

14-429

RAD Stable Element, Final Report [GE].

14-567

SU-2 Antenna. Shipborne Stabilized Radar Antenna for Sea Search.

RL-659

SU-2 Antenna. Line-of-Sight Stabilization of a Radar Beam Reflector Tilt.

RL-660

Stabilized SG-3 Antenna.

RL-665

Stable Scanners and Unsteady Airplanes.

RL-701

STANDING WAVE DETECTORS, see Test Equipment and Transmission Lines

STATISTICAL THEORY, see Theory

SUPERSONICS, see also Crystals, Delay Lines, and Trainers

Tokyo H2X Photographs. Comparison of Operational PPI Photographs with PPI Predictions of the Ultrasonic Radar Trainer.

RL-715

A Theory of a Supersonic Delay Line.

RL-733

A Measurement of Supersonic Velocity in Mercury at 15 Mc/s as a Function of Temperature.

RL-745

Multiple Reflection Delay Tank.

RL-791

On the Theory and Performance of Liquid Delay Lines.

RL-792

Supersonic Delay Lines.

RL-850

Supersonic Solid Delay Lines.

RL-932

An Application of the Pulse Technique to the Measurement of the Absorption of Supersonic Waves in Liquids.

RL-963

A Method of Compensating the Frequency Dependence of Attenuation in a Supersonic Delay Line.

RL-965

Preliminary Handbook of Instructions for H2X Supersonic Trainer, Mark II.

RL-M-157A

Preliminary Handbook of Instructions for H2X Supersonic Trainer, Mark III.

RL-M-157B

Handbook of Instructions for the Preparation of Maps for the H2X Supersonic Trainer.

RL-M-181

CONFIDENTIAL

SUPERSONICS (Continued)

- Preliminary Handbook of Instructions for Supersonic Trainer, AN/APQ-7-T1 (Eagle Trainer).* RL-M-149
- Handbook of Instructions for the Preparation of Mountain Maps for the H2X Supersonic Trainer.* RL-M-205
- Instructions for Installation and Maintenance of Waffle Relief Maps in Ultrasonic Trainers.* RL-M-206
- Specifications for 15-Mc Supersonic Crystal for Crystal Cartridges Types 3 and 7B.* RL-S-35
- Ultrasonic Radar Trainer PPI Photographs of a Simulated H2X Bombing Mission over Tokyo.* RL-S-45
- Velocity of Propagation of 15-Mc Ultrasonic Pulses in Liquids.* RL-S-56

SYNCHROSCOPES, see Test Equipment

TACTICS, see Airborne Radar, Ground Radar, Shipborne Radar, and Theory, Statistical and Specific Applications

TARGETS, see Propagation

TARGET IDENTIFICATION, see IFF, Moving Target Indication, Airborne Radar, Ground Radar, and Shipborne Radar

TEST EQUIPMENT

Antenna

- An Automatic Recorder for Microwave Antenna Pattern Measurements.* RL-266
- Antenna Parts and Measuring Equipment.* RL-472
- Antenna Measuring Equipment.* RL-601-1
- Antenna Measuring Equipment, High Power CW Transmitter for S-Band.* RL-601-2
- Antenna Measuring Equipment, 100-db Linear Audio Amplifier.* RL-601-3
- Antenna Measuring Equipment, Automatic Antenna Pattern Recorder.* RL-601-4
- Field Station for Antenna Measurements.* RL-632
- Attenuators, see also Test Equipment—Power Measuring, and Transmission Lines—Components
- Coaxial Exponential Tapers [PIB].* 14-164
- Progress Report on Coaxial Platinum Film Attenuators [PIB].* 14-215
- Theory of Coaxial Attenuators [PIB].* 14-216
- Soldering to Glass [PIB].* 14-217
- Metallized-Glass Attenuators and Miscellaneous R-F Test Accessories [PIB].* 14-360
- Errors in Attenuation Measurement Caused by Reflection Losses [PIB].* 14-365
- Notes on the Accurate Measurement of Small Attenuations at Microwaves [PIB].* 14-439
- Influence of Inner Wave Guide Dimensions on Broad-Band Performance of Calibrated Attenuators [PIB].* 14-473
- Use of Sintercisen for Cementing Metallized-Glass Resistor Plates, Preliminary Report [PIB].* 14-474
- Frequency Sensitivity of Metallized-Glass Attenuator Inserts Type TMS-4PB [PIB].* 14-477
- Modifications Pertaining to Specifications for Glass Parts of PIB Type V-3 Variable Attenuator*

TEST EQUIPMENT (Continued)

- (PIB-11) [PIB].* 14-478
- Metallized-Glass Plate Program at PIB, Research Conference [PIB].* 14-479
- Accuracy of Attenuation Measurements Made with the Ballantine Voltmeter [PIB].* 14-480
- Frequency Sensitivity of Metallized-Glass Attenuator Inserts Type TMS-2 PB [PIB].* 14-482
- The TMX-14 PB Metallized-Glass Plate for Variable X Band Attenuator, Maximum 25 db [PIB].* 14-483
- The TMX-16 PB Metallized-Glass Plate for X Band Fixed Attenuator, 25 Db [PIB].* 14-484
- The TMX-24 PB Metallized-Glass Plate for X Band Fixed Attenuator Pads of 10 Db and 13 Db [PIB].* 14-485
- A Resistive Variable Attenuator for K Band with 40 Db Maximum Attenuation [PIB].* 14-486
- Electrical Performance of Metallized-Glass Attenuators for TS-147/UP in Extended X Band [PIB].* 14-487
- Precision Metallization of Glass [PIB].* 14-521
- Fixed Value Metallized-Glass Coaxial Attenuators [PIB].* 14-522
- Variable Metallized-Glass Coaxial Attenuators [PIB].* 14-523
- Metallized-Glass Bolometers [PIB].* 14-524
- The Development of Metallized-Glass Attenuating Elements for X Band and Wave Guide [PIB].* 14-525
- Metallized-Glass Wave Guide Attenuators [PIB].* 14-526
- The Development of Metallized-Glass Attenuators for Test Set TS-147/UP [PIB].* 14-527
- R-F Components for Microwave Bridges [PIB].* 14-528
- Microwave Attenuation Standards [PIB].* 14-531
- Microwave Attenuation Measurement [PIB].* 14-532
- Precision Metallized-Glass Resistor Units [PIB].* 14-534
- A Grid-Type R-F Attenuator.* RL-902
- Capacitive-Type R-F Attenuator.* RL-995
- Calibrators
- Model H Calibrator.* RL-333
- Calibrator for Low Altitude Bombing Equipment.* RL-336
- Type J and A Test Unit.* RL-343
- Operating Instructions for Sweep Calibrator, Model B.* RL-M-188
- Operating Instructions for Sweep Calibrator, Model B-3127.* RL-M-223
- Crystal
- Measurement of Conversion Gain with a Modulated Oscillator [Purdue].* 14-144
- A Device for the Selection and Manufacture of Low Level Detectors [U. of Pa.].* 14-201
- Audio Noise Tester [U. of Pa.].* 14-267
- Test Equipment for Germanium Second Detector Units [Purdue].* 14-394

CONFIDENTIAL

TEST EQUIPMENT (Continued)

Crystal (Continued)

Conversion Loss Measuring Apparatus for Crystals in the 3-Cm Band. RL-257
A Simple Method for Determination of the Law of a Crystal. RL-270

Noise Temperature Measuring Apparatus for Crystals as 10,000 to 30 Megacycle Converters. RL-296

A Conversion Loss Set for Testing K-Band Crystal Rectifiers. RL-668

IN23 Loss Measuring Set Type 7388. RL-M-171

IN21 Loss Tester Type 7556. RL-M-177

IN23 Noise Measuring Set Type 7438. RL-M-190

IN21 Noise Tester, Type 11044. RL-M-191

Echo Boxes, see also Cavities

The Resonant Echo Box. RL-277

Design of an Improved X-Band Echo Box. RL-631

K-Band Echo Line. RL-974

Echo Box Application. RL-1040

Tentative Operating Instructions for M.I.T. Radiation Laboratory Echo Box Desig. 3456. RL-M-128

Echo Box Techniques for Testing S-Band Ship-Borne Radars. RL-M-146

Preliminary Instruction Manual for Echo Box for SCR-584. RL-M-159

Instruction Manual for Echo Box Test Kit. RL-M-165

Handbook of Operating and Maintenance Instructions for Echo Boxes TES-8MK and TES-9MK. RL-M-194

The So-Called Standard Target. RL-S-43

Frequency Measurement

Frequency-Wavelength Conversion Tables. RL-652

TFX-29RL Frequency Comparator. RL-681

X-Band Heaton Reference Cavities. RL-972

Instructions for Types TFX-2HU, TFX-3HU, and TFX-6HU Frequency Meters. RL-M-176A

Instructions for Types TFX-2HU, TFX-3HU, and TFX-6HU Frequency Meters. RL-M-176B

TFX-34RL Fixed Frequency Standard. RL-M-207

TFX-35RL Fixed Frequency Standard. RL-M-208

TFX-36RL Fixed Frequency Standard. RL-M-209

Instructions for Types TFX-17GA, TFX-18GA, TFX-19GA, TFX-30EC, TFX-31EC, Model 51 and Similar Types of Micrometer Frequency Meters. RL-M-217

X-Band Sealed Standard Cavities. RL-S-70

General

U. S. Radar Survey, Section 6—Test Equipment [NDRC]. 14-336

U. S. Radar Survey, Section 6—Test Equipment, Change 1 [NDRC]. 14-465

Microwave Radar Field and Laboratory Test Equipment and Components, Final Report [PIB]. 14-535

Measuring Instruments for 3-Cm. RL-26

Catalog of Microwave Test Equipment. RL-S-28

Catalog of Microwave Test Equipment. RL-S-41

General Lecture Series on Radar Components. RL-T-18

TEST EQUIPMENT (Continued)

Impedance Measurement

R-F Components for Microwave Bridges [PIB]. 14-528

The Use of the Magic Tee Microwave Bridge in Measuring Impedance. RL-643

Instructions for THK-2RL Impedance Bridge. RL-M-237

Instructions for K-Band Bench Testing. RL-M-238

Miscellaneous

Simulated High-Altitude Brush Testing Equipment [NDRC]. 14-137

Measurement of Dielectric Constant and Loss with Standing Waves in Coaxial Wave Guides [MIT]. 14-142

Auxiliary Equipment for the M.I.T. Coax Instrument and Its Use [MIT]. 14-210

Microwave Resistance Comparator [PIB.] 14-481

Design of Equipment for Measurement of Dielectric Constant and Loss with Standing Waves in Wave Guides (XII) [MIT]. 14-541

An Apparatus for Determining Heat Distortion Characteristics of Plastics (XIII) [MIT]. 14-542

Regular Report on the Components Testing System, Nov. 12, 1941. RL-42

Regular Report on the Components Testing System, Dec. 17, 1941. RL-43

Measuring Instruments for 3-Cm. RL-26

Regular Report on the Components Testing System, Oct. 8, 1941. RL-41

Special Report on Buffered Multiple Phase Box. RL-44

Regular Report on the Operation of Screen Cage. RL-45

Regular Report on the Advanced Development System. RL-46

Report of the Radio Frequency Section. RL-140

Oscilloscope Presentation of Hysteresis Loops at 60 Cycles and under Pulse Conditions. RL-218

Test Equipment for Pulse Transformers. RL-219

Synchro Test Equipment and Test Procedure. RL-434

Pulse Transformer Committee Standard Test Methods for Pulse Transformer Cores. RL-722

A Method of Shielding for Filter Insertion Loss Measurements. RL-786

R-F Mechanical Modulator for S-Band. RL-798

Microwave Technique as of May, 1943. RL-T-13

Modulator

Service Manual for Video Amplifier [U. of Pa.]. 14-97

Test Set for Raytheon Service Modulator Instructions for Operation and Testing. RL-76

A Diode-Type Pulse Voltmeter. RL-521

Oscilloscopes and Synchroscopes

Western Electric D-160448 Input Equipment and Western Electric X-61501 Oscilloscope [BTL]. 14-87

Report of Activities of Synthesizer Section. RL-75

CONFIDENTIAL

TEST EQUIPMENT (Continued)

Oscilloscopes (Continued)

Description and Operation of the General Purpose

Variable Delay Unit. RL-891

"Wintroscope" or Fast Sweep Synchroscope. RL-1001

Model P4-E Synchroscope and R-P Envelope Indi-

cator. RL-M-124

Instruction Manual for Revised Model P4 Synchro-

scope. RL-M-126

Types TON-1GA (Type Q) and TON-1BI Oscilla-

scopes. RL-M-140

Synchroscope Handbook (Model SYN-15). RL-M-147

Instructions for Operation of High Gain Video

Amplifier for P4-E Synchroscope. RL-M-166

Operating Instructions for the Model G Synchro-

nizer. RL-M-195A

Operating Instructions for Radiation Laboratory

Model 5 Synchroscope. RL-M-212

Model 5 Synchroscope. RL-S-18

Power Measuring Equipment (bolometers, loads,

thermistor bridges, wattmeters, etc.)

Instructions for Use of PIR Type 1H2 Bolometer

Terminal [PIB]. 14-218

Notes on Use of Bolometers for Ultra-High Fre-

quency Attenuation Measurements [PIB]. 14-219

The 1H2 Bolometer Terminal [PIB]. 14-220

Investigation of Effect of Manufacturing and Test

Equipment Variables on X-Band Characteristics

of Bell System Thermistors [BTL]. 14-227

The Investigation of the Effect of Manufacturing

and Test Equipment Variables on the X-Band

Characteristics of Bell System Thermistors, Jan.

21, 1943 [BTL]. 14-255

The Investigation of the Effect of Manufacturing

and Test Equipment Variables on the X-Band

Characteristics of Bell System Thermistors, May

27, 1944 [BTL]. 14-281

The Investigation of the Effect of Manufacturing

and Test Equipment Variables on the X-Band

Characteristics of Bell System Thermistors,

June 19, 1945 [BTL]. 14-457

Investigation of the Effect of Manufacturing and

Test Equipment Variables on the X- and K-

Band Characteristics of Bell System Thermis-

tors, Final Report [BTL]. 14-462

Metallized-Glass Bolometers [PIB]. 14-524

Microwave Power Measurement with Bolometers

[PIB]. 14-529

Wave Guide Termination for Measuring Power at

3.2-Cm. RL-89

Special Report on the Littlefuse Bolometer. RL-145

Microwave Wattmeter. RL-239

Microwave Wattmeter II 3-Cm and 1-Cm. RL-246

3-Cm Bolometer Detector Suitable for Field Mea-

surements (Type Y). RL-262

General Report on Low Level Power Measurement

at 10-Cm in Coax. RL-279

A 10-20 Centimeter Bolometer. RL-288

Bridge Methods in Low and Medium Level R-F

Power Measurement. RL-410

TEST EQUIPMENT (Continued)

Power Measuring (Continued)

The Two-Disc D-C Thermistor Bridge Circuit.

RL-502

A Littlefuse Direct-Reading Wattmeter. RL-548

Matching Resistance Curves by Means of Two

Linear Ganged Potentiometers and a Three-Ter-

minal Resistance Network. RL-610

K-Band High Power Water Load. RL-723

The Measurement of Thermal Radiation at Miera-

wave Frequencies. RL-787

Broad Band Test Loads. RL-847

Instructions for Types TWX-5 and TWS-5EV Bat-

tery-Operated Wattmeters (Preliminary Models

of TS-125/AP). RL-M-174

Instructions for Type TBN-3EV Thermistor

Bridge. RL-M-186A

Instructions for TBN-6SE Thermistor Bridge.

RL-M-203

Handbook of Operating and Maintenance Instruc-

tions for Dummy Load TS-253/AP. RL-M-216

Receivers

An Automatic Noise-Figure Meter. RL-1017

A Trigger Generator for Signal Threshold Studies.

RL-1036

Signal Generators

Development of Pulsed Signal Generator [Syl-

vania]. 14-174

Simplified Measurement of Receiver Sensitivities

(S-Band Noise Source). RL-443

Revision of General Radio Type 605-B Signal Gen-

erator for Pulsing. RL-575

Instructions for TGS-2SE, TGS-3BL and TGS-5BL

Signal Generators. RL-M-141

Instructions for TGX-2RL and TGX-3RL Signal

Generators. RL-M-143A

Instructions for Type TTX-6RH and Type TTX-

10RH Test Sets. RL-M-169

Instructions for Types TTX-6(), TTX-9(), TTX-

10(), TTX-12() and TS-263/TPS-10 Test Sets.

RL-M-169B

Handbook of Operating and Maintenance Instruc-

tions for Test Set TS-259(XR-1)/AP with Sup-

plements on Test Sets TS-259(XR-2)/AP and

TS-259(XR-3)/AP and Signal Generator TS-

259/AP. RL-M-193A

Instructions for TGS-6DE Boreighting Signal

Generator (Preliminary Model of Test Set TS-

348/AP). RL-M-198A

TFX-34RL Fixed Frequency Standard. RL-M-207

TFX-35RL Fixed Frequency Standard. RL-M-208

TFX-36RL Fixed Frequency Standard. RL-M-209

Spectrum Analyzer

Spectrum Analyzer (Type 103) for Pulsed Oscil-

lator at 3,000-Mc. RL-M-115

Tentative Instruction Manual for M.I.T. Radiation

Laboratory Test Set (Type A). RL-M-120

Tentative Operating Instruction for M.I.T. Radia-

tion Laboratory Modified Type 102-A Test Set

(Type 102A-1). RL-M-123

CONFIDENTIAL

TEST EQUIPMENT (Continued)

Spectrum Analyzer (Continued)

Instruction Manual for Spectrum Analyzer (Type 105) for X Band Pulsed Oscillators and Spectrum Analyzer (Type 107) for S Band Pulsed Oscillators. RL-M-127

Instructions for Type TSK-1SE Spectrum Analyzer. RL-M-142

Instructions for TSK-2 Spectrum Analyzer. RL-M-173

Instructions for TSK-2 and Specifications on TSK-4SE Spectrum Analyzers. RL-M-173B

Instructions for TSK-3 and Specifications on TSK-4SE and TTS-4SE Spectrum Analyzers. RL-M-173C

Instructions for Type TSK-5SE Spectrum Analyzer. RL-M-231

Standing Wave Detectors

Loss Measurement by Two Probe Reversal Method. RL-240

Standing Wave Detector. RL-344

Measurement of Impedance with the Standing Wave Detector. RL-346

Matchmeter. RL-705

New Type Probe for Coaxial Standing Wave Detectors. RL-835

System

The Development of Metallized-Glass Attenuators for Test Set TS-147/UP (PIB). 14-527

Special Report on 30-Mc Pulsed Signal Generator. RL-109

Radio Set RHB, Section IV—RHB Test Equipment. RL-508-3

Development of Microwave Test Sets. RL-1011

Microwave Test Signals. RL-1023

Design Proposal for AN/APN-19A Check Set. RL-1062

Handbook of Maintenance Instructions for Type TTX-1BL Test Set (Type B). RL-M-133

Instructions for Type TTX-6RH and Type TTX-10RH Test Sets. RL-M-169

Instructions for Types TTX-6(), TTX-9(), TTX-10(), TTX-12() and TS-263/TPS-10 Test Sets. RL-M-169B

Handbook of Operating and Maintenance Instructions for Test Sets TS-259(XR-1)/AP with Supplements on Test Sets TS-259(XR-2)/AP and TS-259(XR-3)/AP and Signal Generator TS-259/AP. RL-M-193A

Preliminary Maintenance and Operating Instructions for TS-364/APX-15 Test Set. RL-M-202

Handbook of Operating and Maintenance Instructions for Test Set TGI-3CA. RL-M-204

Black Maria Check Set, TS-495/APX. RL-M-233

Instructions for TS-416/AP Check Set. RL-M-234

Tube

Service Manual for Video Amplifier [U. of Pa.]. 14-97

Klystron and CW Test Sets. RL-139

Details of X-Band High Level TR Tube Test Bench. RL-417

TEST EQUIPMENT (Continued)

Tube (Continued)

Measurement of Pressure in Gas Tubes by a Radio-Frequency Method. RL-432

Testing of Fixed-Tuned, Low-Q, ATR Tubes. RL-611

A Proposed Standard Test Cavity for the 707B Tube. RL-693

3-Cm Magnetron Test Bench Construction and Operation. RL-M-114

THEORY, see also theoretical papers under specific subjects.

General Electromagnetic Theory

Transmission of Irises in Waveguides [Cornell]. 14-111

Theoretical Results on the TR Bar [Cornell]. 14-116

Perturbation Theory for Cavities [Cornell]. 14-117

Theory of the TR Bar [Cornell]. 14-128

Theory of Thick Inductive Windows with Small Openings [Cornell]. 14-171

The Scattering of Electromagnetic Radiation by a Narrow Rectangular Strip of Infinite Conductivity [Purdue]. 14-404

Electromagnetic Theory, Final Report [Cornell]. 14-466

Special Report of the Reflection of Plane Waves by Magnetic Substances. RL-146

Theory of a "Black Body" Produced by a Combination of a Thin Screen and a Perfect Mirror. RL-148

Theory of a "Black Body" Produced by a Combination of a Thin Screen and a Perfect Mirror, Supplement to RL-148. RL-154

A Method to Measure High Frequency Permeability of a Ferromagnetic Body. RL-155

Energy Loss in Copper under Pulse Conditions. RL-619

An Extension of Lagrange's Equations to Electromagnetic Field Problems, Equivalent Networks, Part I. RL-626

A Theoretical Treatment of Radar Target Return, Part I. RL-719

Calculation of the Resonant Frequencies of a Torus by Lagrangian and Variational Methods. 14-924

Reflections from Curved Surfaces. RL-976

Reflection of Radiation from Curved Surfaces. RL-1029

A Method for Calculating Magnetron Resonant Frequencies and Modes. RL-1039

An Extension of Lagrange's Equations to Electromagnetic Field Problems, Equivalent Networks, Part II. RL-1046

The Determination of Fields Satisfying Laplace's, Poisson's, and Associated Equations by Flux Plotting. RL-1047

A Flux Plotting Method for Obtaining Fields Satisfying Maxwell's Equations, with Applications to the Magnetron. RL-1048

CONFIDENTIAL

THEORY (Continued)

Miscellaneous

A Method of Summing a Slowly Convergent Series
[P1B]. 14-475

A Method of Virtual Displacements for Electrical Systems with Applications to Pulse Transformers. RL-618

An Electronic Modulator for CW Magnetrons. RL-748

General Theory of Electronic Beam Modulators. RL-758

Fourier Integral Methods of Analysis. RL-762-1
Tables and Methods of Calculation for Line Sources. RL-762-2

Steady-State Vibration of Two-Spring Mechanical System. RL-S-49

Tables of Fourier Transforms of Fourier Series, Power Series, and Polynomials. RL-S-58

Shock Mounting and Vibrations. RL-T-16

Statistical Theory

Theory of Random Processes. RL-454

On the Fluctuations in Signals Returned by Many Independently Moving Scatterers. RL-465

On the Appearance of the A-Scope When the Pulse Travels Through a Homogeneous Distribution of Scatterers. RL-466

Fluctuations in the Return Signals from Random Scatterers. RL-773

Dispersion of High-Frequency Radio Waves in Ionized Gases. RL-836

Theory of Alternating Current Discharges in Gases. RL-967

A Theoretical Treatment of Radar Target Return, Part II. RL-1049

A Procedure for Statistical Analysis of Depth Soundings. RL-S-21

THERMISTORS, see Test Equipment

THYRATRONS, see Tubes

TR AND ATR SWITCHES

Theoretical Results on the TR Box [Cornell]. 14-116

Theory of the TR Box [Cornell]. 14-128

Preliminary Measurements on GE X-Band Transmitter-Receiver Gas Switch [BTL]. 14-225

The Fixed Tuned Broad-Band Transmitter Disconnect Switch-I, Some Preliminary Considerations [BTL]. 14-261

Development of 1B27 TR Tube [Sylvania]. 14-315

Government Radar Patent Program—Technical Report No. 4—Duplexing [MIT]. 14-391

Progress Report on Broad-Band Fixed-Tuned TR and Anti-TR Gas Switching Tubes [GE]. 14-401

Final Report on Broad-Band TR and Anti-TR Tubes [BTL]. 14-402

Final Report on Radar Tube Model Shop [Sylvania]. 14-582

Broad Band TR Tube Development [GE]. 14-594

Receivers. RL-101

Receivers and TR Boxes. RL-102

Receivers, TR Boxes, Measurements. RL-103

Report of the Radio Frequency Section. RL-140

TR AND ATR SWITCHES (Continued)

Transmit-Receive Switch. RL-150

Various 3-Cm TR Box Characteristics. RL-166

Preplanking of Tees for G-Bond. RL-238

Comparison of the Frequency Sensitivities of Series and Shunt TR Junctions. RL-247

Measurements of 721A TR Tube Leakage Power. RL-249

Pre-ignition Transmission through Gas-switching Tubes and its Contribution to Crystal Failures. RL-254

The TR Box. RL-347

Measurement of the Q-Value of a TR Box. RL-349

Direct Coupling in the TR Box. RL-352

Progress Reports on TR Tubes. RL-360

Transmission of Higher Harmonics through a TR Cavity. RL-361

Some Experiments in Determining the Power Transmission and Recovery Time of TR Boxes. RL-362

Maximum Allowable Negative Backswing after Pulses. RL-363

Details of X-Band High Level TR Tube Test Bench. RL-417

Report on K-Band Work in U. S. A. RL-475

Chemical Methods for Maintaining the Partial Pressure of Water Vapor in TR Tubes. RL-593

The 1B27 TR Tube. RL-594

Testing of Fixed-Tuned, Low Q, ATR Tubes. RL-611

1B38 Pre-TR. RL-641

A Low Power X-Band R-F Gas Switch. RL-841

Recovery Time Measurements in Band-Pass TR's for Various Gases. RL-895

Theoretical Interpretation of Recovery Times of TR Boxes. RL-929

X-Band Bandpass TR Tube. RL-970

S-Band Bandpass TR Tubes. RL-971

Note on a Low Power S-Band Gas Switch. RL-979

Microwave Technique as of May, 1943. RL-T-13

General Lecture Series on Radar Components. RL-T-18

TRACKING

Radar Angle Tracking, Government Radar Patent Program—Technical Report No. 1. [NDRC]. 14-319

Third General Report on Section Activities Covering Period from May 14, 1941 to Nov. 14, 1941. RL-5

Circular Sweep Precision Range System Model 4. RL-322

Medium Precision, Self-Synchronous Automatic Range Tracking Circuit. RL-323

Photovoltaic Automatic Range Tracking Unit. RL-324

Antiaircraft Artillery Board Test on the Simplified Circular Sweep Range. RL-326

Automatic Range and Azimuth Tracking. RL-341

Conical Scanning. RL-367

Data on SCR-584 Control Equipment. RL-370

Aided Tracking, Sept. 17, 1943. RL-430

Aided Tracking, Nov. 4, 1943. RL-452

Aided Tracking, Nov. 3, 1943. RL-453

CONFIDENTIAL

TRACKING (Continued)

- Radar Tracking Analysis. RL-494
 A Condenser Phase Shifter Range Unit with Sine Wave Tracking for AN/TPG-1, AN/PPG-1, SCR-598. RL-516
 Theoretical Calculation on Best Smoothing of Position Data for Gunnery Prediction. RL-532
 No Gate Attachment for SCR-584. RL-566
 Analysis of Tracking Data, Description of Calculations. RL-628
 Data Smoothing. RL-673
 Analysis of Over-Water Tracking. RL-695
 Analysis of the Tracking of the 584 X-Band System. RL-753
 AN/APG-2t (Terry). RL-794
 Tests of Aided Tracking with P-1. RL-797
 Interference Between SCR-584's Tracking Beacons. APN-19 RL-816
 Range and Tracking Accuracy of AN/APG-15B. RL-875
 Analysis of the Tracking Errors of the MK56X System. RL-884
 The Angular Alignment of Radar Antennas. RL-950
 Bureaucratic the AN/APG-15 Antenna Assembly. RL-1009
 Computer Mark 14 AN/APA-30 XX-1 Instruction Manual. RL-M-179
 Preliminary Instructions on Modification Kit MC-627 for Radio Set SCR-584. RL-M-220
 Preliminary Instructions on Modification Kit MC-627 for Radio Set SCR-584 (Revised). RL-M-220B
 General Lecture Series on Radar Components. RL-T-18

TRAINERS AND TRAINING MATERIAL

- Coordinate Transformation Circuits Using Resolvers and Coordinate Transformation by Means of Electrical Networks [Bartol]. 14-288
 Apparatus for the Transformation of Rectangular Coordinates Using Armazoresolvers [Bartol]. 14-293
 Final Report on the Supersonic Radar Trainer Project [Bartol]. 14-294
 A Portable Signal Generator for Loran Receivers [RCA]. 14-297
 Manual of Operation and Maintenance for SM Radar Trainer [Emerson]. 14-370
 Final Report SM Trainer Development [Emerson]. 14-371
 Final Report on the Building of Basic SCR-584 Trainer and Advanced SCR-584 Trainer [Foxboro]. 14-372
 Development and Construction of Equation Solvers for GCI and SCI Radar Trainers, Technical Report Reviewing the History [Willeax & Gibbs]. 14-442
 Supersonic Loran Trainer, Final Report [Bartol]. 14-446
 AI-10 Trainer Simulation at I-F Level. RL-397
 AI-10 Bench Trainer Simulation at Video Level. RL-398
 Load Mass Simulator. RL-399

TRAINERS AND TRAINING MATERIAL (Continued)

- Radar Trainer Equation-Solvers for the Relative Motion of Two Moving Objects in Space. RL-436
 Training Apparatus for Radio Set SCR-584. RL-437
 AN/APS-4 (ASH) Trainer. RL-446
 Fading Simulator. RL-556
 QA-2B Servo Adaptor. RL-645-1
 Q1-2 and Q-3 Servo Amplifier. RL-645-2
 H-3 Trigger Unit. RL-645-3
 The I-3 Signal Unit. RL-645-4
 The J-3 Modulator Unit. RL-645-5
 The H-2 Trigger Unit. RL-645-6
 I-2 Signal Unit. RL-645-7
 The R-1 and the K-2 Crystal Drivers. RL-645-8
 The MI-1A, MI-1B, and MI-3A Course Mechanisms. RL-645-9
 S-2, S-2B, S-3, S-4, S-4B Motor Control Units. RL-645-10
 The S-5 and S-5B Motor Control Units. RL-645-11
 The U-1 and U-2 Pre-amplifier Units. RL-645-12
 X-1 Error Integrator. RL-645-13
 N-1 IFP Unit. RL-645-14
 A Simple Trainer for GCA Approach Controller. RL-689
 The Trainer for Radio Set AN/MPN-1. RL-676
 Tokyo H2X Photographs. Comparison of Operational PPI Photographs with PPI Predictions of the Ultrasonic Radar Trainer. RL-715
 Link Conversion Unit for Ground-Controlled Approach Trainer. RL-716
 Two Proposed Methods of Recording the Position of a Moving Link Crab. RL-736
 AN/APG-T1 Training Equipment. RL-759-1
 AN/APG-15 Modification Kit for AN/APG-T1 Training Equipment. RL-759-2
 The AN/APS-6 Antenna Simulator. RL-839
 A Tracking Error Recorder for the Ground Controlled Approach Trainer. RL-855
 Ground Course Computer for AN/APQ-T1. RL-856
 Naam Doppler Simulator. RL-857
 Trainer for Mark 35 Radar. RL-907
 Ground Clutter Unit for the Ground Controlled Approach Trainer. RL-927
 The SP "Feed-In" Trainer. RL-928
 The Mark VII Supersonic Trainer. RL-962
 A Displacement or Velocity Servo Amplifier. RL-1015
 Supersonic Components for Use in Radar Trainers. RL-1050
 A Supersonic Echo Simulating System for AN/APQ-T1. RL-1055
 Special GCA Trainer Circuits. RL-1057
 The OCJ-1 Trainer. RL-1058
 A Dummy Lay Transmitter for the OBJ Radar Trainer. RL-1059
 The Cadillac Trainer. RL-1072
 Preliminary Handbook of Instructions for H2X Supersonic Trainer, Mark II. RL-M-157A
 Preliminary Handbook of Instructions for H2X Supersonic Trainer, Mark III. RL-M-157B
 Technical Manual for SSV Trainer (RCC Model only). RL-M-160

CONFIDENTIAL

TRAINERS AND TRAINING MATERIAL (Continued)

- Handbook of Instructions for the Preparation of Maps for the H2X Supersonic Trainer.* RL-M-181
Preliminary Technical Manual for Falcon Trainer AN/APG-13-T1. RL-M-182
Preliminary Handbook of Instructions for Supersonic Trainer, AN/APQ-7-T1 (Eagle Trainer). RL-M-189
Handbook of Instructions for the Preparation of Mountain Maps for the H2X Supersonic Trainer. RL-M-205
Instructions for Installation and Maintenance of Waffle Relief Maps in Ultrasonic Trainer. RL-M-206
Handbook of Maintenance Instructions for AN/APG-15-T1 Trainer. RL-M-221
Ultrasonic Radar Trainer PPI Photographs of a Simulated H2X Bombing Mission over Tokyo. RL-S-45

TRANSFORMERS, see also Pulse Transformers

- Preliminary Results on Calibration of Auto-Transformers [Cornell].* 14-364
Final Report, Transformer Model Shop [Westinghouse]. 14-382
Hermetic Seal Collared Wafer Development [Sylvania]. 14-408
Transformer Model Shop, Final Report [Raytheon]. 14-443
Transformer Model Shop at Sharon, Pa., Final Report [Westinghouse]. 14-454
Transformer Model Shop, Final Report [GE]. 14-591

TRANSMISSION LINES

- Components—Design and Measurements (Attenuators, Cables and Connectors, Chokes, Couplings, Directional Couplers, Joints, Transitions, etc.) An Experimental 1/2 Inch Universal Stub [PIB].* 14-221
X-Band Wave-Guide Tuning Section [PIB]. 14-222
Development of a High Impedance Radio Frequency Transmission Line [Federal]. 14-424
Government Radar Patrol Program—Technical Report No. 5—R-F Components [NDRC]. 14-430
Tests on Additional Modified Type "N" Connectors [PIB]. 14-472
Fixed Voltage Metallized-Glass Coaxial Attenuators [PIB]. 14-522
Variable Metallized-Glass Coaxial Attenuators [PIB]. 14-523
The Development of Metallized-Glass Attenuating Elements for X-Band Wave Guide [PIB]. 14-525
Metallized-Glass Wave Guide Attenuators [PIB]. 14-526
Type "N" Connector Design and Tests [PIB]. 14-530
Development of Miscellaneous R-F Line Components [PIB]. 14-533
Precision Metallized-Glass Resistor Units [PIB]. 14-534

TRANSMISSION LINES (Continued)

Components (Continued)

- Waveguide Termination for Measuring Power at 3.2-Cm.* RL-89
RF Components List No. 1. RL-151
Tune-up Procedure for 3-Cm RF System. RL-160
Wave Guide Components and Instruments for the 1.25-Cm Region. RL-165
Rear Rectangular Guide Antenna Feed. RL-169
Illumination and Phases of Antenna Feeds. RL-170
Round Guide Rear Antenna Feeds. RL-171
Radiation Resistance of Antennas Inside Wave Guides of Arbitrary Cross Sections. RL-176
T-Junctions in Rectangular Wave Guides, Part I, Theory. RL-179
Junctions in Rectangular Wave Guides, Part II, Final Formulas and Curves. RL-180
Reflections from Sections of Tapered Transmission Lines and Wave Guides. RL-189
Microwave Wattmeter. RL-239
Rotary Joints with E-Stub Transformers. RL-243
Microwave Wattmeter II, 3-Cm and 1-Cm. RL-246
Capacity (Choke) Couplings as Rigid and Non-Rigid Waveguide Connectors. RL-255
Some Matching Properties of Antenna Feeds. RL-261
Information on Corrugated Coaxial Lines and Wave Guides. RL-264
Double Dihedral Rectangular Wave Guide Antennas. RL-273
Antenna Feeds for 1/2" Stub-Supported Coaxial Line. RL-271
Antenna Feeds from 1/2" Coaxial Line. RL-274
General Report on Low-Level Power Measurement at 10-Cm in Coax. RL-279
Standing Wave Detector. RL-344
Elimination of the "Trombone" Between Transmitter and Junction in a Duplexing System. RL-345
Measurement of Impedance with the Standing Wave Detector. RL-346
Infinite Rejection Filters. RL-364
Microwave Linear Radiators. RL-366
R-F Attenuators. RL-404
Report on Type A and Type B Pulse Transmission Cables and Connectors. RL-424
Report on K-Band Work in U. S. A. RL-475
High Impedance Cable. RL-529
Performance of Couplings for 1 1/2-Inch by 3-Inch Waveguide. RL-538
The Sealing of Air at Rotating Shafts and Joints. RL-552
Vertebrate Type Flexible Waveguide. RL-574
The Use of the Magic Tee Microwave Bridge in Measuring Impedances. RL-643
A Microwave Frequency Discriminator. RL-662
Low Power R-F Switch. RL-675
Design Considerations for Directional Couplers. RL-724
Experiments in Microwave Breakdown. RL-731

CONFIDENTIAL

TRANSMISSION LINES (Continued)

Components (Continued)

- Attenuation of RG-9/U Cable as a Function of Temperature and Frequency in the X-Band. RL-754
- An Improved K-Band Vertebrae Waveguide. RL-776
- Dielectric Phase Shifters for Waveguide. RL-788
- Present Status of High Power at S-Band. RL-793
- S-Band Coaxial Line to Rectangular Waveguide Transitions. RL-802
- A Microwave Band-Pass Filter in Waveguide. RL-814
- An Electronic Frequency Stabilization System for CW Microwave Oscillators. RL-815
- Absorption Coefficient of a Styralny Filled Coaxial Line. RL-827
- 3-Cm Vertebrae Flexible Waveguide. RL-831
- Flexible Waveguides. RL-832
- New Type Probe for Coaxial Standing Wave Detectors. RL-835
- K_u Rotary Joints for the 3 Centimeter Band. RL-853
- Theory of Directional Couplers. RL-860
- Rat Race Duplexing. RL-885
- A Theory of Resonance in Rotary Joints of the TM₀₁ Type. RL-993
- Waveguide Motional Joints. RL-1037
- Summary of High Power Breakdown Tests on Microwave Components. RL-1071
- Instruction Manual for Installation of Radiation Laboratory Type B Plugs on Cables. RL-M-149
- Instruction Manual for Installation of Radiation Laboratory Type A Plugs on Cables. RL-M-150
- Instruction Manual for Installation of Chiksan Tool Company 1/8-Inch Revolving Joint (Drawing No. 61DIC) on Radiation Laboratory Types R-1 and R-2 Cables (Army-Navy Types RG-27/U and RG-28/U). RL-M-154
- Wave Guide Handbook, Section I, Sept. 24, 1942; Section II, Abbreviation in Wave Guides, Oct. 2, 1942; Section III, Obstacles in Wave Guides, Oct. 27, 1942; Section IV, Bends and T-Junctions in Wave Guides, Dec. 4, 1942; Section V, Dielectric Structures in Wave Guides, Feb. 9, 1943. RL-T-9
- Microwave Technique as of May 1943. RL-T-13
- Discontinuities—Irises, Obstacles, etc. (for Antenna Arrays, see Antennas)
- Transmission of Irises in Waveguides [Cornell]. 14-111
- Theory of Thick Inductive Windows with Small Openings [Cornell]. 14-171
- A New Method for the Precision Measurement of Wave Guide Discontinuities [CIT]. 14-317
- Precision Measurement of Wave Guide Discontinuity [CIT]. 14-460
- A New and Practical Method for Matching Two Obstacles in a Wave Guide [CIT]. 14-461
- Theory of Diffraction by Small Holes. RL-128
- Losses and Reflections Introduced by Joints and Plugs in 3-Cm Wave Guides. RL-164

TRANSMISSION LINES (Continued)

Discontinuities (Continued)

- Susceptance of Asymmetrically Located Windows in Rectangular Wave Guides. RL-183
- Imagined Constants for Small Irises. RL-194
- Coupling Between Inductive Windows in Wave Guides. RL-197
- Theory of Side Windows in Wave Guides. RL-199
- Excitation of Cavities through Windows. RL-202
- Theory of Obstacles in Resonant Cavities and Wave Guides. RL-205
- Theory of Circular Heads in Rectangular Wave Guides. RL-206
- One-Sided Inductive Irises and Quarter-Wave Capacitive Transformers in Waveguide. RL-426
- Probe-Fed Slots on Radiating Elements in Linear Arrays. RL-455
- Dielectric Windows in Waveguide. RL-587
- Discontinuities in Standing Wave Detectors and Waveguide Junction Steps. RL-893
- The Interaction of Discontinuities on a Transmission Line. RL-930
- Wave Guide Handbook, Section I, Sept. 24, 1942; Section II, Abbreviation in Wave Guides, Oct. 2, 1942; Section III, Obstacles in Wave Guides, Oct. 27, 1942; Section IV, Bends and T-Junctions in Wave Guides, Dec. 4, 1942; Section V, Dielectric Structures in Wave Guides, Feb. 9, 1943. RL-T-9
- Microwave Technique as of May, 1943. RL-T-13
- General Considerations, (Theory Measurements, Matching, Lines in General, Coax, Waveguides, Special Lines.)
- Junction Effect of Two Unequal Matched Coaxial Lines [PIB]. 14-123
- A New Method for the Precision Measurement of Wave Guide Discontinuities [Cal. Inst. of Tech.]. 14-317
- Influence of Inner Wave Guide Dimensions on Broad-Band Performance of Calibrated Attenuators [PIB]. 14-473
- Tuning the RF Components of a System (Lawson Technique). RL-11
- Impedance in Transmission Lines and Wave Guides. RL-116
- Microwave Transmission. RL-121
- Report on Junction Effects in Wave Guides. RL-124
- Report of the Radio Frequency Section. RL-140
- Design and Test of Concentric Transmission Lines. RL-141
- Tentative Simplified Explanation of the Lawson Lines. RL-142
- Special Report on Design Data for 50-OHM Rigid Coaxial Line. RL-147
- Tests on Undercut Heads in a Concentric Line. RL-152
- Tune-up Procedure for 3-Cm R-F System. RL-160
- Matching, Losses, and Frequency Sensitivity of a 3-Cm R-F System. RL-161
- Polarization Effects in a Circular Wave Guide at 3-Cm. RL-162

CONFIDENTIAL

TRANSMISSION LINES (Continued)

General Considerations (Continued)

- Propagation in Wave Guides Partly Filled with Dielectric. RL-174
- Reflections from Sections of Tapered Transmission Lines and Wave Guides. RL-189
- Formal Theory of Wave Guides of Arbitrary Cross Section. RL-198
- Transmission Line Construction Details. RL-231
- Stub Supports in $\frac{1}{2}$ " Coaxial Lines. RL-232
- Phase Distortion in Broad-Band Stub Supports. RL-237
- Preplumbing of Taps for G-Band. RL-238
- Loss Measurement by Two Probe Reversal Method. RL-240
- Dielectric Transmission Measurements. RL-244
- A Method of Measuring the S-Band Characteristic Impedance of Coaxial Cable. RL-252
- Information on Corrugated Coaxial Lines and Wave Guides. RL-264
- A Video Delay Line. RL-302
- R-F Attenuators. RL-404
- Radome Bulletin Number 7, The Measurement of High Reflections at Low Power. RL-483-7
- Radome Bulletin Number 9, The Matching of High Standing Wave Ratios. RL-483-9
- Radome Bulletin Number 10, The Measurement of Small Reflections. RL-483-10
- Radome Bulletin Number 17, Current Progress on R-F Research. RL-483-17
- The Theory of Corrugated Transmission Lines and Waveguides. RL-494
- Corners, Bends, and Twists in Rectangular Waveguide. RL-585
- Waveguides without Metal Walls. RL-726
- A Method of Shielding for Filter Insertion Loss Measurements. RL-786
- Conductivity Loss Measurements at K-Band. RL-854
- Wulworth Waveguide Bends. RL-S-3
- X-Band Waveguide Corrosion Proofing. RL-S-29
- Transmission Lines and Wave Guides, Similarities and Differences. RL-T-5
- Explanation of Impedance Matching. RL-T-6
- Wave Guide Handbook, Section I, Sept. 24, 1942; Section II, Abbreviation in Wave Guides, Oct. 2, 1942; Section III, Obstacles in Wave Guides, Oct. 27, 1942; Section IV, Bends and T-Junctions in Wave Guides, Dec. 4, 1942; Section V, Dielectric Structures in Wave Guides, Feb. 9, 1943. RL-T-9
- Theory of Impedance and Admittance Diagrams and Allied Subjects. RL-T-10
- Reflection Coefficients and Impedance Charts. RL-T-11
- Microwave Technique as of May, 1943. RL-T-13
- Use and Derivation of A, Z, & Charts. RL-T-14
- Introduction to Alternating Currents, Q Values, and Transmission Lines. RL-T-17
- General Lecture Series on Radar Components. RL-T-18

TRANSMIT-RECEIVE SWITCHES, see TR and ATR Switches

TRIODES, see Tubes

TROPICALIZATION, WEATHER-PROOFING, etc.

Moisture-Proofing of Button Mica Capacitors. RL-790

X-Band Waveguide Corrosion Proofing. RL-S-29

TUBES, see also Cathode Ray Tubes, Cathodes, Magnetrans, and TR and ATR Switches

Diodes

S/N Measurements on the CV-58. RL-416

A Survey of High-Vacuum Diodes Used for Surge-Limiting Operation in Modulators. RL-580

The Temperature-Limited Diode. RL-761

High Voltage Oxide Coated Vacuum Rectifiers. RL-892

Engineering

Operations of the Project Tube Shop [RCA]. 14-248

Development of 1B27 TR Tube [Sylvania]. 14-815

Local Oscillators, see also Triodes and Velocity-Modulated Tubes

Final Report on K-Band Oscillator, Type A502A [RCA]. 14-383

Special Report on 30-Mc Pulsed Signal Generator. RL-109

A 1-Cm Oscillator. RL-111

Committee on Centimeter Receiving Tubes and Resonators. RL-286

Noise from Local Oscillators. RL-304

An Electronic Frequency Stabilization System for CW Microwave Oscillators. RL-815

Miscellaneous

Fine Grid Technique. RL-299

Measurement of Pressure in Gas Tubes by a Radio Frequency Method. RL-432

Clamping Tubes. RL-572

Receiving Tubes

Three Centimeter Receiving Tubes [BTL-WE]. 14-106

Committee on Centimeter Receiving Tubes and Resonators. RL-286

The Radiation Laboratory S-Band Amplifier. RL-306

Pulse Characteristics of Common Receiver-Type Tubes. RL-704

Spark Gaps

Report on Pulsar Tube Development [West. E. & M. Co.]. 14-105

Report on Evacuated Pressure Gaps [West. E. & M. Co.]. 14-150

High Power Series Gaps, Progress Report, Sept. 5, 1944 [BTL-WE]. 14-316

Development of Series Spark Gaps for the Period January 1, 1943 to June 30, 1944 [West. E. & M. Co.]. 14-327

High-Power Series Gaps, Jan. 15, 1945 [BTL-WE]. 14-398

High-Power Series Gaps, Bi-Monthly Report for January and February 1945 [BTL-WE]. 14-414

High-Power Series Gaps, Bi-Monthly Report for March and April 1945 [BTL]. 14-438

CONFIDENTIAL

TUBES (Continued)

Spark Gaps (Continued)

- High-Power Series Gaps, Bi-Monthly Report, July 9, 1945 [BTL-WE]. 14-468
High-Power Series Gaps Having Sintered Iron Sponge-Mercury Cathodes [BTL-WE]. 14-488
Double-Trigging and Voltage Balancing for Series Gaps, (BL-R-929-2G-12) [Westinghouse]. 14-493
Development of Series Spark Gaps, Final Report (RL-R-929-2C-14) [Westinghouse]. 14-494
Disipation in Series Gaps and Voltage-Current Relationships during the Discharge. RL-682-1
Division of Voltage Across Series Spark Gaps in a Line Type Modulator. RL-682-2
General Characteristics of Kneaded Spark Gaps with Emphasis on Aluminum Cathode-Type Series Gaps. RL-682-3
Some Characteristics of the 1B41, 1B45, and 1B49 Series Spark Gaps. RL-682-4
Operation of Sintered Iron Sponge-Mercury Cathode Type Series Gaps at 300, 400, and 500 Microsecond Conditions. RL-682-5
Three Electrode Triggered Gap. RL-880
Stabilization
Magnetron Stabilizing Tuner. RL-473
Influence of Pulse Transformer Design on 4J31-35 Magnetron Stability. RL-622
An Electronic Frequency Stabilization System for CW Microwave Oscillators. RL-815
A Method of Rating the Stability of Oscillators for MTI. RL-819
An Improved Frequency Stabilization System for Microwave Oscillators. RL-837
Wide Range Tunable Stabilizer. RL-964
Combined Reflector-Cavity Automatic Frequency Control for Thermally Tuned Reflex Oscillator Tubes. RL-1034

Theory

- Space Charge between Parallel Plane Grids. RL-534
A Qualitative Analysis of Hysteresis in Reflex Oscillators. RL-650
Notes on the Reflex Oscillator. RL-709
Operation and Testing of Reflex Oscillators. RL-742
An Electronic Modulator for CW Magnetrans. RL-748
General Theory of Electronic Beam Modulators. RL-758
The Temperature-Limited Diode. RL-761
Electronic Tuning of Reflex Oscillators. RL-774
Static Frequency-Modulation Characteristics of the Reflex Klystron. RL-781
Characteristics of Preproduction 2K45 Tubes. RL-821
Some Notes on Space-Charge-Limited Oscillators and Amplifiers at Microwave Frequencies. RL-822
Theory of Noise from the Reflex Oscillator. RL-873

TUBES (Continued)

Thyratrons

- Pulse Thyratrons, Progress Report for June—December 1941 [GE]. 14-90
Progress Report on Hydrogen-Filled Thyratrons, Aug. 18, 1942 [GE]. 14-107
Report on Developmental Work on Pulse Thyratron Type ZG-473 [GE]. 14-108
Final Report on Pulse Thyratrons, Apr. 10, 1943 [GE]. 14-411
Development and Production of Tube Type H50 Hydrogen Thyratron, Final Report [Kuthe]. 14-536
Final Report on Rudur Tube Model Shop [Sylvania]. 14-582
Measurement of Pressure in Gas Tubes by a Rudia Frequency Method. RL-432
Summary of Life-Test Data on Sylvania 4C35 Hydrogen Thyratrons. RL-589
Trigger Requirements of the 4C35 and 5C45 Hydrogen Thyratrons. RL-605
Metallic Hydride Studies. RL-813
Technical Data and Operating Notes for the 5C22 Hydrogen Thyratron. RL-828
Summary of the Life Test Program on 3C45, 4C35, and 5C22 Hydrogen Thyratrons. RL-865
Hydrogen Thyratrons in Pulse Generator Circuits. RL-953
Instruction Manual for Model 7A Hydrogen Thyratron Modulator. RL-M-145
Triodes, including Lighthouse Triodes
Development of the SB-811, SB-811B and SB-846 Triodes for Pulsed and CW Operation at Microwave Frequencies [Sylvania]. 14-590
The Resonant Ultra-high Frequency Oscillator, September, 1940 to June 30, 1942, Progress Report and Final Report [U. of Cal.]. 14-593
Committee on Centimeter Receiving Tubes and Resonators. RL-286
Report on Tests of RCA and GE "Lighthouse" Tubes. RL-290
Performance of the GL446 Lighthouse Tube as an R.F. Amplifier in the 16-20 Cm Region. RL-291
Lighthouse Tube Anode Contacts. RL-292
Measurements on 446 "Lighthouse" Tubes. RL-413
Lighthouse Tube Transmitter-Receiver LHTR Mk I. RL-429
Lighthouse Tube Superregenerative Receivers. RL-484
Lighthouse R-F Envelope Indicator. RL-542
Rieke Diagrams and Probe-Plate Plunger Charts of Lighthouse Tubes in a Re-entrant Cavity. RL-564
G.E. GL2C40 Tant-Grid Lighthouse Tubes. RL-600
Operational Characteristics of 2C43 Tubes as Pulsed Oscillators in a Re-entrant Cavity. RL-732
SB-846B S-Band Oscillator. RL-954

CONFIDENTIAL

TUBES (Continued)

Velocity-Modulated Tubes, (including Klystrons and McNally Tubes).

Operating Characteristics of the 707A Reflex Oscillator. RL-233

Operating Characteristics of the 707A Reflex Oscillator, Supplement to RL-233. RL-234

Operating Characteristics of the 417 Reflex Klystron. RL-235

Temperature-Compensated 707A (McNally Tube). RL-236

Operating Characteristics of the 419 Klystron. RL-251

Characteristics and Present Production of McNally Tubes. RL-303

Measurement of Electrical Tuning Ranges of 707 Tubes. RL-421

Characteristics of Recent 723A Tubes (X-Band Local Oscillators). RL-427

Characteristics of Recent 723A/B Tubes. RL-570

A Qualitative Analysis of Hysteresis in Reflex Oscillators. RL-650

A Proposed Standard Test Cavity for the 707B Tube. RL-693

Frequency Discontinuities of Local Oscillator Tubes Due to High-Q Load Circuits. RL-694

Notes on the Reflex Oscillator. RL-709

TUBES (Continued)

Notes on Load Effects in Reflex Oscillators. RL-715

Operation and Testing of Reflex Oscillators. RL-742

Low-Voltage K-Band Oscillator. RL-763

Electronic Tuning of Reflex Oscillators. RL-774

Static Frequency-Modulation Characteristics of the Reflex Klystron. RL-781

Measurements on Noise from Reflex Oscillators. RL-872

Theory of Noise from a Reflex Oscillator. RL-873

Effect of the Tuning Plunger on Operation of 2K33 Type Tubes. RL-942

Electron Optical Studies of the 2K33 Tube. RL-943

Operating Instructions for the Model 417 Klystron for Use as a Local Oscillator in Radar Receivers. RL-M-108

Notes on the Power Output of 723A Tubes. RL-S-7

General Lecture Series on Radar Components. RL-T-18

WATERBORNE EQUIPMENT, *see* Shipborne Radar

WAVEGUIDES, *see* Transmission Lines

WEATHER-PROOFING, *see* Tropicalization

CONFIDENTIAL

PART IV ORGANIZATION INDEX OF DIVISION 14 REPORTS

BARTOL RESEARCH FOUNDATION, <i>see</i> The Franklin Institute		CHRYSLER CORPORATION	
BELL TELEPHONE LABORATORIES, <i>see</i> Western Electric Company		Radar Scanning Unit.	14-566
BROWN UNIVERSITY		Radar Rotating Antenna Spiral Scanning Units, Balance and Adjustment.	14-573
<i>Abridged Report on Circuits for Improving Focus on Electrostatic Cathode-Ray Tubes under Conditions of Intensity and Deflection Modulation.</i>	14-132	COLORADO, UNIVERSITY OF	
Cathode-Ray Tube Detectors.	14-376	Development of a Stable Noncrystal Controlled Oscillator.	14-98
CALIFORNIA INSTITUTE OF TECHNOLOGY		COLUMBIA UNIVERSITY, RADIATION LABORATORY	
A New Method for the Precision Measurement of Waveguide Discontinuities.	14-317	One-Cm Magnetron Research.	14-120
Precision Measurement of Waveguide Discontinuities.	14-460	Knurled Type Cathode—Construction and Life Test.	14-149
A New and Practical Method for Matching Two Obstacles in a Waveguide.	14-461	Progress Report on the Development of One- and Three-Cm Magnetrons.	14-223
CALIFORNIA, UNIVERSITY OF		The Elimination of Extraneous Resonance Effects in Tunable Cm Magnetrons.	14-233
Mechanical Vacuum Switches, Transmission Line and RC Pulsing Circuits.	14-156	The Tuning Properties of the Tunable Magnetrons in the Three-Cm Band.	14-234
The Resonant Ultrahigh-Frequency Oscillator, June 30, 1942.	14-593	Cold Impedance of E5 Tubes.	14-235
CARNEGIE INSTITUTE OF TECHNOLOGY		Columbia Radiation Laboratory Progress Report, January 1944.	14-239
The Theory of Dark-Trace Tubes, I.	14-131	Waveguide Output for 1.25-Cm Magnetrons.	14-245
The Theory of Dark-Trace Tubes, II.	14-172	Columbia Radiation Laboratory Progress Report, February 1944.	14-260
Darkening and Bleaching of KCl.	14-177	Columbia Radiation Laboratory Progress Report, March 1944.	14-260
Two Notes on the Potentials Developed in Cathode-Ray Screens during Bombardment.	14-178	Equivalent Circuit for Resonant Modes of a Magnetron, Zero Mode.	14-322
Memorandum on the May 1943 Meeting on Dark-Trace Tubes at Radiation Laboratory.	14-183	The Resonant Modes of the 'Rising Sun' (A Tube) Anode.	14-323
A Memorandum on the Scattering of Light by DT Screens.	14-198	Magnetrons for Production of Centimeter Wavelength Radiation also Absorption of Such Radiation in Water Vapor.	14-588
Darkening and Bleaching of KCl, II, the Effect of Temperature.	14-205	Rising Sun Magnetron with Large Number of Anode Cavities for Centimeter and Millimeter Wavelengths.	14-589
Memorandum upon the Behavior of DT Screens Containing Magnesium.	14-214	CORNELL UNIVERSITY	
Experiments with Double-Layer DT Screens.	14-253	Transmission of Irises in Waveguides.	14-111
The Theory of Dark-Trace Tubes, III.	14-257	Theoretical Results on the T-R Box.	14-116
The Depth of the Darkened Region and the Build-Up of Darkening and Persistent Trace in KCl Screens.	14-258	Perturbation Theory of Cavities.	14-117
The Theory of Dark-Trace Tubes, IV.	14-265	Theory of the T-R Box.	14-128
Aging of KCl Crystals and Screens under Electron Bombardment.	14-302	Analysis of 6SA7 Gated Amplifier.	14-158
The Properties of Evaporated Layers of Potassium Chloride Containing Small Additions of Metallic Elements when Subjected to Electron Bombardment.	14-320	Analysis of Double-Triode Integrator.	14-159
CARNEGIE INSTITUTION OF WASHINGTON		Range-Tracking Circuit with Position Memory.	14-160
Investigations to Prepare a Transparent Phosphor.	14-572	Range-Tracking Circuit with Velocity Memory.	14-161
		Theory of Signal-to-Noise Ratio of Crystal Mixers.	14-162
		Theory of Thick Inductive Windows with Small Openings.	14-171

CONFIDENTIAL

CORNELL UNIVERSITY (Continued)

- On the Distribution of the Average Noise Current in Receivers. 14-305
- Device for Determination of the Vertical by Means of Cosmic Rays. 14-363
- Preliminary Results on Calibration of Autotransformers. 14-364
- Electronic Computers for Division, Multiplication, Squaring, Etc. (VAC-4). 14-435
- A Mechanical Integrating System Incorporating a Magnetic Amplifier (MA-2). 14-436
- Use of a Specially Designed Magnetic Amplifier in Computing Circuits. 14-437
- Electromagnetic Theory. 14-466
- D-C Resolvers (DCR-2). 14-512
- A-C Potential Equalizers and Phase Sensitive Detectors (ACE-2). 14-513
- Constant of EMF's of Dry Batteries (B1). 14-537
- Electronic Computers for Division, Multiplication, Squaring, Etc., Some Additional Remarks. 14-538
- Investigation of Circuits of Use in Precision Radar Computers. 14-546

DALMO VICTOR, INC.

- AIA-1 Scanner Development Program Completion Report, Feb. 3, 1944. 14-199
- AIA-1 Scanner Development Program, Progress Report, Aug. 14, 1944. 14-321
- Radar Scanner Development Program, Progress Report, Sept. 30, 1944. 14-361
- Radar Scanner Development Program, Progress Report, September 1 to November 1, 1944. 14-418
- Radar Scanner Development Program, Progress Report, November 1, 1944 to January 1, 1945. 14-419

DOUGLAS AIRCRAFT COMPANY

- Design and Test of Project Eagle Airfoil. 14-290

DU MONT LABORATORIES, ALLEN B., INC.

- The Spectral Distribution of the Luminescence of Red Screen Materials. 14-269
- Final Technical Report for PPI Adaptor Development. 14-330
- Instruction Book for Precision PPI Adaptor, Du Mont Type No. 255 (Indicator-Tracker Unit BC 1365). 14-340
- Cathode-Ray Screen Tube Development. 14-509

DU PONT DE NEMOURS AND COMPANY, E. I., INC.

- Special Protective Coatings, Progress Report, January 14, 1944. 14-211
- Sintering or Melting of Boron Powder, Progress Report, November 1, 1943. 14-229
- Sintered Boron Project, Progress Report, December 1, 1943. 14-231
- Sintered Boron Project, Progress Report, January 1, 1944. 14-232
- Sintering and Melting of Boron Powder, Progress Report, February 1, 1944. 14-240
- Special Protective Coatings, Progress Report, February 14, 1944. 14-241
- Special Protective Coatings, Monthly Report, September 13, 1944. 14-247
- Progress Report on the Sintering and Melting of Boron, March 1, 1944. 14-252

DU PONT DE NEMOURS (Continued)

- Monthly Summary and Informal Monthly Progress Report on Protective Coatings, March 14, 1944. 14-254
- Progress Report on Sintering and Melting of Boron Powder, April 1, 1944. 14-262
- Monthly Summary and Informal Monthly Progress Report on Protective Coatings, April 14, 1944. 14-264
- Progress Report on Sintering or Melting of Boron, May 1, 1944. 14-272
- Monthly and Informal Monthly Progress Report on Special Protective Coatings, May 13, 1944. 14-273
- Special Protective Coatings, Progress Report, June 13, 1944. 14-280
- Progress Report on Sintering or Melting of Boron Powder, June 1, 1944. 14-283
- Special Protective Coatings, Progress Report, July 14, 1944. 14-291
- Sintering or Melting of Boron Powder, July 1, 1944. 14-292
- Special Protective Coatings, Monthly Summary and Informal Progress Report, August 11, 1944. 14-306
- Progress Report on Sintering or Melting of Boron Powder, August 1, 1944. 14-307
- Sintering or Melting of Boron and Preparation of Hyperpure Germanium, Progress Report, September 1, 1944. 14-318
- Sintering or Melting of Boron and Preparation of Hyperpure Germanium, Progress Report, October 1, 1944. 14-324
- Special Protective Coatings, Monthly Summary, October 13, 1944. 14-325
- The Preparation of Samko Films "Scheme A." 14-343
- Survey of Binder (Type A), Special Protective Coatings, I. 14-344
- Special Protective Coatings, II, Formulation Studies, Composition Variables. 14-345
- Special Protective Coatings, III, Formulation Studies, Physical Processing Variables. 14-346
- Special Protective Coatings, IV, Pigment Evaluation Studies. 14-347
- Special Protective Coatings, V, Film Thickness Evaluation. 14-348
- Special Protective Coatings, VI, Cross-Knifed Films for Practical Work at MIT. 14-349
- Special Protective Coatings, VII, Knife Coating on Semiconductors. 14-350
- Special Protective Coatings, VIII, Large Scale Coating Trials Investigation of Fabric Coating Equipment. 14-351
- Special Protective Coatings, IX, Spray Trials at Toledo. 14-352
- Special Protective Coatings, X, Development of Cement- and Paint-Making Procedure for Scheme A. 14-353
- Special Protective Coatings, XI, Development of Machine-Spraying Process for Scheme A. 14-354
- Special Protective Coatings, XII, Characterization of Metal Flakes. 14-355

CONFIDENTIAL

DU PONT DE NEMOURS (Continued)

Special Protective Coatings, XIII, Preparation of Film Calendaring.	14-356
Special Protective Coatings, Methods of Analysis for Aluminum Film and Its Ingredients.	14-357
Special Protective Coatings, Monthly Summary, November 14, 1944.	14-358
Sintering or Melting of Boron and Preparation of Hyperpure Germanium, Progress Report, November 1, 1944.	14-362
Special Protective Coatings, Monthly Summary, December 13, 1944.	14-378
Final Report—Part I, Sintering and Melting of Boron; Part II, Preparation of Hyperpure Germanium, October 21, 1944.	14-386
Monthly Summary, Special Protective Coatings, January 12, 1945.	14-389
Special Protective Coatings, Physical Performance Tests on Preferred Sandia System under Simulated Service Conditions.	14-395
Special Protective Coatings, Monthly Summary, February 14, 1945.	14-403
Special Protective Coatings, Monthly Summary, March 14, 1945.	14-422
Special Protective Coatings, Monthly Summary, May 12, 1945.	14-426
Special Protective Coatings, Monthly Summary, June 14, 1945.	14-448
Special Protective Coatings, Monthly Summary, April 13, 1945.	14-452
Special Protective Coatings, Monthly Summary, July 12, 1945.	14-464
Special Protective Coatings, XV, Semiworks-Seale Preparation of Machine-Sprayed Film, November 11, 1944, to January 20, 1945.	14-467
Special Protective Coatings, XIV, Formulation Studies, Exploratory Work for New Uses.	14-469
Special Protective Coatings, XVII, Laboratory Study of Adhesive Systems.	14-470
Special Protective Coatings, Monthly Summary and Informal Monthly Progress Report, August 12, 1945.	14-491
Special Protective Coatings, Monthly Summary and Informal Monthly Progress Report, September 14, 1945.	14-502
Special Protective Coatings, XXV, Final Report, September 30, 1945.	14-508
Special Protective Coatings, XVI, Surface Adjustment of "Une B" Film.	14-547
Special Protective Coatings, XVIII, Semiworks-Seale Preparation of Machine-Sprayed Film.	14-548
Special Protective Coatings, XIX, Practical Application Trials (Une A).	14-549
Special Protective Coatings, XX, Practical Application Trials, Laboratory Study of Adhesives (Une B and C).	14-550
Special Protective Coatings, XXI, Formulation Development Studies.	14-551
Special Protective Coatings, XXII, Preparation of Films by Hot Pressing.	14-552

DU PONT DE NEMOURS (Continued)

Special Protective Coatings, XXIII, Semiworks-Seale Preparation of Machine-Sprayed Film.	14-553
Special Protective Coatings, XXIV, Process Development Work at Newburgh.	14-554
EMERSON RADIO AND PHONOGRAPH CORPORATION	
Development of a Power Supply and Temperature Stabilized Oscillator for the Battery Operated Ladar Receiver.	14-203
Manual of Operation and Maintenance for SM Radar Trainer.	14-370
Final Report SM Trainer Development.	14-371
FAIRCHILD CAMERA AND INSTRUMENT CORPORATION	
Reports of Tests on Remount Range Follow-Up System.	14-246
The Fairchild Central Station Computer (Part I); The Fairchild .50 Caliber M2 Computer and AGS Adaptations for an Emerson Tail Turret; Part II, Final Report.	14-433
Advanced Design for Radar Photography.	14-503
FEDERAL TELEPHONE AND RADIO CORPORATION	
Development of a High-Impedance Radio-Frequency Transmission Line.	14-424
THE FOXBORO COMPANY	
Final Report on the Building of Basic SCR-584 Trainer and Advanced SCR-584 Trainer.	14-372
THE FRANKLIN INSTITUTE (Bartol Research Foundation)	
Crystal Clock Project, Third Progress Report, May 1, 1943.	14-145
Magnetron Cathode Studies, Progress Report, May 1, 1943.	14-148
Magnetron Cathode Studies, Progress Report, July 1, 1943.	14-169
Crystal Clock Project and 10-Kc Oscillator, Progress Report, August 1, 1943.	14-175
Sealing and Relative Efficiency of Different Sized Magnetrons.	14-176
Magnetron Cathode Studies, Progress Report, September 1, 1943.	14-187
Crystal Clock Project and 10-Kc I-C Oscillator, Progress Report, October 1, 1943.	14-193
Magnetron Cathode Studies, Progress Report, November 1, 1943.	14-209
Crystal Clock Project and 10-Kc I-C Oscillator, Final Report, January 1, 1944.	14-226
Magnetron Cathode Studies, Progress Report, January 1, 1944.	14-251
General Dynamical Considerations Applied to Piezo-Electric Oscillations of a Quartz Crystal in an Electrical Circuit.	14-271
Supplement to General Dynamical Considerations Applied to Piezo-Electric Oscillations of a Quartz Crystal in an Electrical Circuit.	14-271S
Coordinate Transformation Circuits Using Resolvers and Coordinate Transformation by Means of Electrical Networks.	14-288
Apparatus for the Transformation of Rectangular Coordinates Using Arma-Resolvers.	14-293
Final Report on the Supersonic Radar Trainer Project, July 20, 1944.	14-294

CONFIDENTIAL

THE FRANKLIN INSTITUTE (Continued)

<i>Cathode Sparking, Effect of Super-Imposed D.C. and Role of Coating Resistance.</i>	14-295
<i>Sparkling of Oxide-Control Cathodes.</i>	14-296
<i>Back-Bombardment of Magnetron Cathodes.</i>	14-309
<i>Secondary Electron Emission from Oxide-Coated Magnetron Cathodes.</i>	14-310
<i>Supersonic Loran Trainer.</i>	14-446
<i>Cathode Coating Resistances as Measured by Embedded Probes.</i>	14-514
<i>Secondary Electron Emission from Oxide-Coated Cathodes.</i>	14-515
<i>Sparkling Phenomena in High Vacuum Thermionic Tubes.</i>	14-516
<i>Sintered Thoria Cathodes.</i>	14-517
<i>Effect of Particle Size.</i>	14-518
<i>Purification of Barium and Strontium Carbonates.</i>	14-519
<i>A Note on Nitrocellulose Binders.</i>	14-520
<i>Magnetron Cathode Studies, Final Report, October 31, 1945.</i>	14-545
<i>General Dynamical Considerations Applied to Piezo-Electric Oscillations of Quartz Crystal in Electrical Circuit, Supplement II.</i>	14-557
GALVIN MANUFACTURING CORPORATION	
<i>Development Work on AN/PPN-2 Radio Set.</i>	14-434
<i>Development and Production Samples of APG Series (AN/APG-5 and AN/APG-8) Radar Equipment [including] Manuscript Handbook of Maintenance Instructions for Radio Sets AN/APG-5 and AN/APG-5A and Tests Conducted at Northwestern University under Galvin Manufacturing Corporation [subcontract].</i>	14-569
GENERAL ELECTRIC COMPANY	
<i>Pulse Thyatron, Progress Report for June, 1941, to December, 1941.</i>	14-90
<i>Two-Megawatt Transmitters for NDRC Project No. 3.</i>	14-92
<i>Report of Work on Duplex-Screen Tubes during 1941.</i>	14-96
<i>Work on Slow Phosphors for Radar Indicator Screens.</i>	14-104
<i>Progress Report on Hydrogen-Filled Thyatrons.</i>	14-107
<i>Report on Developmental Work on Pulse Thyatron, Type ZG-473.</i>	14-108
<i>Report of Progress of Work on Dark-Trace Tubes.</i>	14-147
<i>Airborne Loran Equipment.</i>	14-191
<i>Two Motor-Driven Gun Turrets.</i>	14-230
<i>Development and Construction of a Local Turret Gyro Lead-Computing Sight for AGS Radar.</i>	14-268
<i>The AGL Receiver.</i>	14-275
<i>K-Band Germanium Crystals, Bimonthly Progress Report, October 5, 1944.</i>	14-328
<i>K-Band Germanium Crystals, Bimonthly Progress Report, December 15, 1944.</i>	14-381
<i>Final Technical Report on AGL-1 [Fire Control] Development.</i>	14-385

GENERAL ELECTRIC COMPANY (Continued)

<i>Progress Report on Broad-Band Fixed-Tuned TR and Anti-TR Gas Switching Tubes, December 22, 1944.</i>	14-401
<i>K-Band Germanium Crystals, Bimonthly Progress Report, February 15, 1944.</i>	14-406
<i>Precision Aircraft Scanners.</i>	14-410
<i>Final Report on Pulse Thyatrons, April 10, 1943.</i>	14-411
<i>APG-1 Tracking and Firing Tests (Data Folder No. 72649), January 15, 1945. Div. 14-244.1-M2</i>	14-427
<i>K-Band Germanium Crystals, Final Report, March 28, 1945.</i>	14-427
<i>A 3,000-Mc Receiver Using Velocity Modulation Tubes Type ZP-439.</i>	14-432
<i>Development of Gunfire Control System, Mark 56.</i>	14-497
<i>Components of CXHR (SCI) Equipment.</i>	14-507
<i>RASD Stable Element.</i>	14-567
<i>2CHIA1 (AGL-1) Aircraft Fire Control Computer.</i>	14-570
<i>Transformer Model Shop, Final Report, April 23, 1945.</i>	14-581
<i>Broad-Band TR Tube Development, November 7, 1945.</i>	14-594
GEORGIA SCHOOL OF TECHNOLOGY	
<i>Development and Use of the Microband Lock-In Amplifier.</i>	14-592
GILFILLAN BROTHERS, INC.	
<i>Radio Set AN/MPN-1 (XE-1), Ground Controlled Approach (GCA) Radar, Technical Report.</i>	14-449
INTERNATIONAL BUSINESS MACHINES CORPORATION	
<i>Special Mechanical Counter for the Mark III or Phase-Shift Loran Indicator.</i>	14-368
INTERNATIONAL PROJECTOR CORPORATION	
<i>Design of Egg Beater Scanning Antenna for the Eagle Radar Bomb Sight and Construction of a Model, Final Report.</i>	14-312
KANSAS STATE COLLEGE	
<i>Instantaneous Voltage Measurement by Use of a Trigger Circuit, Final Technical Report.</i>	14-409
KUTHE LABORATORIES, INC.	
<i>Development and Production of Tube Type H50 Hydrogen Thyatron.</i>	14-536
LELAND ELECTRIC COMPANY	
<i>Development of Three-Phase Aircraft Alternator.</i>	14-287
LIBRASCOPE, INC.	
<i>Final Report for Contract OEMar-1044—Part 1, History of the Contract and Patent Disclosures; Part 2, Triangle Solver for Eagle Project (Delta); Part 3, Triangle Solvers for H2X Bombing Project (Alpha); Part 4, Triangle Solver for Laboratory Use (Gamma); Part 5, Redesign of Triangle Solver for Eagle Project (Beta); Part 6, Preliminary Ballistic Computer for a Gun Director System (Eta); Part 7, Ballistic Computer Mark 42, Mod 0 (RHO); Part 8, Ballistic Computer Mark 42, Mod 1, Ser. No. 1; October 31, 1945.</i>	14-587

CONFIDENTIAL

MACHLETT LABORATORIES, INC.

Final Report of Development Work Done on High-Power S-Band Magnetron (HP-10V) and Series Gaps. 14-423

MAGUIRE INDUSTRIES, INC.

Final Report on H2K Roll-Stabilized Scanner. 14-429

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Progress Report on Ultrahigh-Frequency Dielectrics, Report I, Laboratory for Insulation Research, January 1943. 14-121

The Interaction Between Electromagnetic Fields and Dielectric Materials, Report II, Laboratory for Insulation Research. 14-123

Measurement of Dielectric Constant and Loss with Standing Waves in Coaxial Wave Guides, Report III, Laboratory for Insulation Research. 14-142

Auxiliary Equipment for the MIT Coax Instrument and Its Use, Report IV, Laboratory for Insulation Research. 14-210

Tables of Dielectric Materials (Volume I), Report V, Laboratory for Insulation Research. 14-237

The Polystyrene Plastics as High-Frequency Dielectrics, Report VI, Laboratory for Insulation Research. 14-276

Final Report, Including the Design of Stroking Motor for a Hydraulic Servomechanism, Servomechanisms Laboratory. 14-279

High Dielectric Constant Ceramics, Report VII, Laboratory for Insulation Research. 14-360

Tables of Dielectric Materials (Volume II), Report VIII, Laboratory for Insulation Research. 14-425

Techniques and Calculations Used in Dielectric Measurements on Shorted Lines, Report IX, Laboratory for Insulation Research. 14-490

Low Thermal Expansion Plastics, Report X, Laboratory for Insulation Research. 14-539

Titania Ceramics II, Report XI, Laboratory for Insulation Research. 14-540

Design of Equipment for Measurement of Dielectric Constant and Loss with Standing Waves in Waveguides, Report XII, Laboratory for Insulation Research. 14-541

An Apparatus for Determining Heat-Distortion Characteristics of Plastics, Report XIII, Laboratory for Insulation Research. 14-542

Preliminary Oscillograph Studies of RF Build-up in Magnetrans, Report XIV, Laboratory for Insulation Research. 14-543

Development and Wide-Frequency Investigation of Dielectrics, Report XV, Laboratory for Insulation Research. 14-544

MICHIGAN, UNIVERSITY OF

Rotational Line Width in the Absorption Spectrum of Atmospheric Water Vapor, October 10, 1944 and Supplement (dated February 1, 1945). 14-320

NATIONAL DEFENSE RESEARCH COMMITTEE (Division 14)

Technical Report of Radiation Laboratory, June 1, 1941. 14-93

Use of Microwave for Detection Purposes, December 15, 1941. 14-94

NATIONAL DEFENSE RESEARCH COMMITTEE (Continued)

Use of Microwave for Detection Purposes, August 15, 1942. 14-95

Use of Microwave for Detection Purposes, Bimonthly Report, March 15, 1942. 14-100

Use of Microwave for Detection Purposes, Bimonthly Report, June 1, 1942. 14-101

Use of Microwave for Detection Purposes, Bimonthly Report, October 1, 1942. 14-109

Indicator Types as of October, 1942. 14-114

Summary of Projects, Bimonthly Report, January 1, 1943. 14-118

Summary of Projects, Bimonthly Report, March 1, 1943. 14-124

Computers for Radar Control of Plane-to-Plane Warfare. 14-130

Investigation of Power-Supply Requirements as a Function of Future Radar Circuit Developments. 14-134

Power Supply for Airborne Radar Equipment. 14-135

Analysis of Commutation of Direct-Current Machines at High Altitudes, November 1942. 14-136

Simulated High-Altitude Brush-Testing Equipment. 14-137

Clearance for Carbon Brush Investigation. 14-138

Analysis of Commutation of Direct-Current Machines at High Altitudes, April 1943. 14-139

Summary of Projects, Bimonthly Report, May 1, 1943. 14-141

X-Ray Emission from Radar Equipment. 14-157

Bimonthly Project Status Report and Summary of Projects, July 1, 1943. 14-170

Bimonthly Project Status Report and Summary of Projects, September 1, 1943. 14-184

Project List, Division 14, as of September 15, 1943. 14-188

Index of Radar Systems, October 1, 1943. 14-196

Bimonthly Project Status Report and Summary of Division 14 Projects, November 1, 1943. 14-213

Project Report, Division 14, February 1, 1944. 14-238

Project Report, Division 14, April 1 1944. 14-242

Index of Radar Systems, February 15, 1944. 14-244

Index of Division 14, NDRC Reports, Other than Radiation Laboratory Reports, May 1, 1945. 14-250

Division 14 Contract List. 14-270

Project Report, Division 14, June 1, 1944. 14-277

Project Report, Division 14, July 1, 1944 (Supplement to above report). 14-278

Project Report, Division 14, August 1, 1944. 14-301

Radar Angle Tracking, Government Radar Patent Program—Technical Report No. 1. 14-319

U. S. Radar Survey, Section 1, Airborne Radar. 14-331

U. S. Radar Survey, Section 2, Shipborne Radar. 14-332

U. S. Radar Survey, Section 3, Ground Radar. 14-333

U. S. Radar Survey, Section 4, Navigational Radar. 14-334

CONFIDENTIAL

NATIONAL DEFENSE RESEARCH COMMITTEE (Continued)

<i>U. S. Radar Survey, Section 6, Test Equipment.</i>	14-336
<i>Project Report, Division 14, October 1, 1944.</i>	14-338
<i>Government Radar Patent Program, Technical Report No. 2—Precise Range Measurement and Tracking.</i>	14-339
<i>Project Report, Division 14, December 1, 1944.</i>	14-373
<i>Government Radar Patent Program, Technical Report No. 3, Magnetrons.</i>	14-384
<i>Project Report, Division 14, Supplement, January 1, 1945.</i>	14-388
<i>Government Radar Patent Program, Technical Report No. 4, Duplexing.</i>	14-391
<i>U. S. Radar Survey, Section 7, Nomenclature Index.</i>	14-393
<i>Project Report, February 1, 1945.</i>	14-400
<i>Government Radar Patent Program, Technical Report No. 6, Fundamental Radar Systems.</i>	14-417
<i>Project Report, Division 14, April 1, 1945.</i>	14-420
<i>Government Radar Patent Program, Technical Report No. 5, R-F Components.</i>	14-430
<i>Project Report, Division 14, June 1, 1945.</i>	14-440
<i>U. S. Radar Survey, Section 3, Ground Radar, Change 1.</i>	14-451
<i>U. S. Radar Survey, Section 4, Navigational Radar, Change 1.</i>	14-455
<i>Project Report, Division 14, Supplement, July 1, 1945.</i>	14-463
<i>U. S. Radar Survey, Section 6, Test Equipment, Change 1.</i>	14-465
<i>Project Report, Division 14, August 1, 1945.</i>	14-489
<i>Project Report, Division 14, December 1945.</i>	14-565
<i>U. S. Radar Survey, Section 8, Airborne Radar, Change 1.</i>	14-568
<i>U. S. Radar Survey, Section 7, Nomenclature Index, Change 1.</i>	14-574
<i>Index of Division 14, NDRC Reports Other than Radiation Laboratory Reports, First Supplement, March 1, 1946.</i>	14-583
PENNSYLVANIA, UNIVERSITY OF	
<i>Service Manual for Video Amplifier.</i>	14-97
<i>The Principles of Crystal Rectifiers.</i>	14-102
<i>The Electrical Conductivity of Silicon and Germanium.</i>	14-110
<i>Compounds of Silicon and Germanium.</i>	14-112
<i>D-C Burnout Temperature in Silicon Rectifiers.</i>	14-113
<i>Farther D-C Burn-Out Experiments on Silicon and Germanium Rectifiers.</i>	14-119
<i>Electron Microscopy of Tungsten Points.</i>	14-125
<i>Noise in Crystal Rectifiers.</i>	14-126
<i>Spectroscopic Determination of Aluminum in Silicon.</i>	14-127
<i>Barrier Capacity in Silicon Cartridge Rectifiers.</i>	14-140
<i>High-Frequency Rectification Efficiency of Crystals.</i>	14-153
<i>Effect of Etch on Crystal Rectifiers.</i>	14-165
<i>Capacity in Crystal Rectifiers.</i>	14-166

PENNSYLVANIA, UNIVERSITY OF (Continued)

<i>Isolization of Donor Levels in Crystal Rectifiers by Thermal Agitation.</i>	14-173
<i>Radioactive Detection of Aluminum in Silicon.</i>	14-180
<i>Effect of Tapping on Barrier Capacity.</i>	14-181
<i>Behavior of Silicon Crystals at Low-Level Powers.</i>	14-182
<i>Behavior of Westinghouse Silicon as a Low-Level Detector.</i>	14-186
<i>Noise in Silicon Rectifiers at Low Temperatures.</i>	14-189
<i>Dependence of IF Impedance and Noise-Temperature of Crystal Rectifiers on Matching Conditions.</i>	14-194
<i>Comparison of Wedge and Cone Contacts on For Silicon.</i>	14-197
<i>A Device for the Selection and Manufacture of Low-Level Detectors.</i>	14-201
<i>Analysis of Silicon for Nonvolatile Matter.</i>	14-204
<i>Recent Research on Silicon Rectifiers.</i>	14-224
<i>Noise Spectrum of Silicon Rectifiers.</i>	14-256
<i>Audio Noise Tester.</i>	14-267
<i>X-Band Video Crystals.</i>	14-274
<i>Production and Effects of a Depletion Layer in Doped Silicon.</i>	14-282
<i>Effect of Heat Treatment on Low-Level Performance.</i>	14-304
<i>Temperature Variation of Low-Level Crystal Performance.</i>	14-308
<i>Note on the Measurement of Noise-Temperature.</i>	14-311
<i>Evaporated Films of Germanium and Silicon.</i>	14-337
<i>Effect of Small Crystallites on Conductivity.</i>	14-377
<i>Crystal Audio Noise.</i>	14-387
<i>Handy Guide to Crystal Types, February 15, 1945.</i>	14-405
<i>Photoeffects in Pure Silicon.</i>	14-412
<i>Burnout of X-Band Video Crystals.</i>	14-428
<i>High-Break Voltage Silicon.</i>	14-453
<i>X-Band Crystal Video Performance with Bias.</i>	14-456
<i>Handy Guide to Crystal Types, September 25, 1945.</i>	14-499
<i>Development Research on X-Band Video Crystals.</i>	14-501
<i>Double Valued Characteristics of Crystal Rectifiers, Comments.</i>	14-504
<i>Temperature Effects of S-Band Video Crystals.</i>	14-505
<i>Mass Spectrometer Investigation of the Silicon Tetrachloride Used in Making Pure Silicon.</i>	14-558
<i>Tests on German Crystals.</i>	14-559
<i>Burnout Life Tests of X-Band Video Crystals.</i>	14-560
<i>Use of Different Fillers in Crystal Rectifiers.</i>	14-561
<i>Research and Development of Crystal Rectifiers, Final Report.</i>	14-562
<i>Geometrical Structure of Silicon Surfaces.</i>	14-563
<i>Burnout of S-Band Video Crystals.</i>	14-564
<i>Development of (1) High-Frequency Video Amplifier and (2) Radar Ranging System, Final Report.</i>	14-571

CONFIDENTIAL

PHILCO CORPORATION

Final Report of Research and Development Conducted on Lighthouse Tube Transmitter-Receiver (LHTK) Units. 14-190

POLYTECHNIC INSTITUTE OF BROOKLYN

Isolation Effect of Two Unequal Matched Coaxial Lines. 14-123
Coaxial Exponential Tapers. 14-164
Progress Report on Coaxial Platinum Film Attenuators. 14-215
Theory of Coaxial Attenuators. 14-216
Soldering to Glass. 14-217
Instructions for Use of PIB Type IR2 Bolometer Terminal. 14-218

Notes on Use of Bolometers for Ultrahigh-Frequency Attenuation Measurements. 14-219
The IR2 Bolometer Terminal. 14-220
An Experimental 1/2-Inch Universal Stub. 14-221
X-Band Wave-Guide Tuning Section. 14-222
Metallized-Glass Attenuators and Miscellaneous RF Test Accessories. 14-360
Errors in Attenuation Measurement Caused by Reflection Losses. 14-365
Notes on the Accurate Measurement of Small Attenuations at Microwaves. 14-439
Tests on Additional Modified Type "N" Connectors. 14-472

Influence of Inner Waveguide Dimensions on Broad-Band Performance of Calibrated Attenuators. 14-473

Use of Sauerbrey for Cementing Metallized-Glass Resistor Plates, Preliminary Report. 14-474
A Method of Summing a Slowly Convergent Series. 14-475

X-Band Slotted Section Test Equipment, Memorandum. 14-476

Frequency Sensitivity of Metallized-Glass Attenuator Inserts Type TMS-4PB. 14-477
Modifications Pertaining to Specifications for Glass Parts of PIB Type V-3 Variable Attenuator. 14-478

Metallized-Glass Plate Program at PIB Research Conference. 14-479

Accuracy of Attenuation Measurements Made with the Ballastine Voltmeter. 14-480
Microwave Resistance Comparator. 14-481
Frequency Sensitivity of Metallized-Glass Attenuator Inserts Type TMS-3PB. 14-482

The TMX-14PB Metallized-Glass Plate for Variable X-Band Attenuator, Maximum 25 db. 14-483

The TMX-16PB Metallized-Glass Plate for X-Band Fixed Attenuator, 25 db. 14-484

The TMX-24PB Metallized-Glass Plate for X-Band Fixed Attenuator Pads of 10 db and 13 db. 14-485
A Resistive Variable Attenuator for K-Band with 40 db Maximum Attenuation. 14-486

Electrical Performance of Metallized-Glass Attenuators for TS-147/UP in Extended X-Band. 14-487
Precision Metallization of Glass. 14-521

Fixed Value Metallized Glass Coaxial Attenuators. 14-522

POLYTECHNIC INSTITUTE OF BROOKLYN (Continued)
Variable Metallized-Glass Coaxial Attenuators.

Metallized-Glass Bolometers. 14-523
The Development of Metallized-Glass Attenuating Elements for X-Band Waveguide. 14-525
Metallized-Glass Waveguide Attenuators. 14-526
The Development of Metallized-Glass Attenuators for Test Set TS-147/UP. 14-527
RF Components for Microwave Bridges. 14-528
Microwave Power Measurement with Bolometers. 14-529

Type "N" Connector Design and Tests. 14-530
Microwave Attenuation Standards. 14-531
Microwave Attenuation Measurement. 14-532
Development of Miscellaneous RF Line Components. 14-533

Precision Metallized-Glass Resistor Units. 14-534
Microwave Radar Field and Laboratory Test Equipment and Components. 14-535

PURDUE UNIVERSITY

Investigation of Crystal Rectifier DC Characteristics. 14-115

The Diffusion Theory of Crystal Rectifiers. 14-129

Theory of Noise in Conductors, Semiconductors, and Crystal Rectifiers. 14-133

Determination of Logarithmic Constants of Crystal Rectifiers with the Oscilloscope. 14-143

Measurement of Conversion Gain with a Modulated Oscillator. 14-144

Crystal Noise as a Function of DC Bias and 30 MC Impedance Measured with a Diode Noise Source. 14-167

Theory of Contact Rectifiers. 14-168

The Theory of Crystal Mixers in Terms of Measurable Mixer Constants. 14-259

High-Frequency Characteristics of Rectifiers. 14-284

Quantitative Spectroscopic Analysis of Impurities in Germanium and Silicon. 14-285

Theory of Small Deviations from Pure Diode Behavior. 14-286

Preparation of High-Voltage Germanium Crystals. 14-341

The High-Voltage Germanium Rectifier, Section I, Experimental. 14-342

The High-Voltage Germanium Rectifier, Section II, Theoretical. 14-375

Test Equipment for Germanium Second Detector Units. 14-394

The Scattering of Electromagnetic Radiation by a Narrow Rectangular Strip of Infinite Conductivity. 14-404

Properties of Germanium High-Back Voltage Rectifier Units. 14-413

Dependence of Performance of Germanium Second Detector Units on Bias and Video Load. 14-416

Transmission by a SRT in a Partition in a Rectangular Waveguide. 14-575

Further Developments in the Preparation and Heat Treatment of Germanium Alloys. 14-576

CONFIDENTIAL

PURDUE UNIVERSITY (Continued)

- Production and Performance of Germanium High Back Voltage High Back Resistance Crystal Rectifiers.* 14-577
- Dependence of Noise Temperature DC and IF Crystal Conductance on Matching Conditions.* 14-578
- Temperature Dependence of High Voltage Germanium Rectifier DC Characteristics.* 14-579
- Photoelectric Effects in Germanium.* 14-580
- Dependence of Forward Conductance and Back Resistance of High-Back Voltage Germanium on Voltage and Frequency.* 14-581
- Crystal Capacity as a Function of Bias and Its Relation to the Theory of Crystal Rectification.* 14-584
- Final Report on Crystal Developments for Radar Receivers.* 14-585
- RADIO CORPORATION OF AMERICA, National Broadcasting Company
- Report of Radio Relaying of Radar Signals.* 14-243
- RADIO CORPORATION OF AMERICA, RCA Victor Division
- Aircraft Position-Indicating Equipment (Receiving).* 14-89
- Summary of Research on Radar Indicator Screens, Apr. 14, 1942.* 14-103
- Noise Reduction by Delayed Feed-Back.* 14-146
- Propagation of Signals on 45.1, 47.4, and 2,800 Mc from Empire State Building to Hightstown and Riverhead, L. I.* 14-179
- Descriptive Technical Specification—Fighter Tail-Warning Equipment, AN/APS-13(XA1).* 14-185
- Lightweight X-Band Radar, Progress Report No. 1.* 14-195
- Lodar Pulse-Direction-Finding Receiver.* 14-200
- Characteristics of Simplified Loran Receiving Equipment.* 14-206
- Development of Airborne Loran Receiver-Indicator Model LRN-1.* 14-207
- Development of Loran Receiver Trainer.* 14-208
- Simplified Loran Receiving Equipment.* 14-228
- Development of a Tail-Warning Radar System, TWL-2 (AN/APS-13).* 14-236
- Operations of the Project Tube Shop (Harrison, N. J.).* 14-248
- Dark-Trace Radar Indicator Screens, Progress Report No. 2, February 18, 1944.* 14-249
- A Portable Signal Generator for Loran Receivers.* 14-297
- Propagation of Signals on 45.1, 47.4, and 2,800 Mc from Empire State Building to Hightstown and Riverhead, L. I.* 14-298
- A Converter for 170-Kc Loran Signals.* 14-329
- Mica Windows for Waveguide Output Magnetrons.* 14-366
- Waveguide Output Magnetrons Employing Fused Quartz Output Transformers.* 14-367
- Skintron Projection Cathode-Ray Tubes with Dark-Trace P10 Screens.* 14-369
- Final Report on K-Band Oscillator, Type A5022A.* 14-383
- BUPX Antenna, Type A.* 14-396

RADIO CORPORATION OF AMERICA (Continued)

- Frequency Stabilization of Oscillators by a Method Particularly Adapted to the Higher Frequencies and Magnetron Sources.* 14-397
- Final Report on Ultraportable Racon (BUPX).* 14-407
- Final Report on Tubes for Lightweight X-Band Radar and Ultraportable X-Band Beacon.* 14-415
- K-Band Magnetron, Technical Report.* 14-444
- An Improved Type of LF Loran Transmitter.* 14-458
- An Exciter for LF Loran Transmitter.* 14-459
- Development of a Power-Output Tube for NDRC Microwave Section Project No. 3.* 14-471
- Development of the Skatron Cathode-Ray Tube for Projection Indicator.* 14-492
- Research and Development Leading to New and Improved Radar Indicators, Text and Figures.* 14-498
- Operations of the Project Tube Shop.* 14-500
- Method of Measurement and Some Performance Characteristics of P14 Screens, with a Note on Manufacturer's Specifications for Tubes Containing P14 Screens.* 14-586
- Shoran, a New Type of Radar System for High-Precision Position-Finding in Aerial Navigation, AN/APN-3, AN CPN-2, Serial No. 58, W-535-oc-671.* 14-586
- RAYTHEON MANUFACTURING COMPANY
- Final Report for Transformer Model Shop, March 12, 1945.* 14-443
- RENSSELAER POLYTECHNIC INSTITUTE
- Operating Characteristics of Multivibrators and Gates, Progress Report No. 1, January 6, 1943.* 14-154
- Operating Characteristics of Multivibrators and Gates, Progress Report No. 2, June 1, 1943.* 14-155
- Performance and Stability of Triggered Gates.* 14-445
- RESEARCH CONSTRUCTION COMPANY, INC.
- Radar Model Shop, Final Report, December 31, 1945.* 14-556
- SPERRY GYROSCOPE COMPANY
- The Sperry Stabilized Aircraft Gunlaying System (AGL-2), Intermediate Phase.* 14-249
- SPERRY PRODUCTS, INC.
- Motor Torpedo Boat Counting Radar Sight for Blind, Semiblind and Visual Fire.* 14-392
- SYLVANIA ELECTRIC PRODUCTS, INC.
- Development of a Tunable IF Amplifier.* 14-99
- Development of Pulsed Signal Generator.* 14-174
- Development of 1B2 TR Tube.* 14-315
- Preparation of Exponential Decay Powders and Screens ZnF₂Mn, ZnMgF₂Mn and MgSiO₃Mn.* 14-379
- Hermetic Seal Collared Wafer Development.* 14-408
- Aircraft Radar Equipment, Handbook of Maintenance Instructions for Army-Navy Model RT-63/APS British Model 110DB/206.* 14-495
- Development and Production of 50 K Band RF Heads, Army-Navy Model RT-63/APS, British Model 110DB/206.* 14-496
- Radar Tube Model Shop.* 14-582

CONFIDENTIAL

Sylvania Electric Products, Inc. (Continued)

Development of SB-811, SB-811B and SB-846 Trioden for Pulsed and CW Operation at Microwave Frequency. 14-590

STEVENS INSTITUTE OF TECHNOLOGY

Development of Electrical Brakes through Powdered Metallurgy, Technical Report of Research Work Conducted at Metal Powder Laboratory, November 13, 1943. 14-313

UTAH RADIO PRODUCTS

Pulse Transformers. 14-447

WASHINGTON, THE STATE COLLEGE OF

Propagation of 10-Cm Waves in a 52-Mile Optical Path over Land. The Correlation of Signal Patterns with Radiomane Data. 14-151

Radiotelephone Communication on 3,000 Mc. 14-152

The Captive Radiomane and Wired Sound Techniques for Detailed Low-Level Meteorological Sounding. 14-192

Propagation of 10-Cm Waves Over an Inland Lake Correlated with Meteorological Sounding. 14-212

The Propagation of 10-Cm Waves over Land Paths of 14, 52, and 112 Miles. 14-202

WESTERN ELECTRIC COMPANY, Bell Telephone Laboratories

Western Electric D-180448 Input Equipment and Western Electric X-61901 Oscilloscope. 14-87

Instruction Book for Western Electric D-181131 Receiver and Western Electric D-161132 Indicator for a Long-Range Navigation System. 14-91

Three-Centimeter Receiving Tubes. 14-106

Interference of Loran Pulses with Emlin Telephone and Telegraph Reception. 14-163

Preliminary Measurements on GE X-Band Transmitter Receiver Gun Switch. 14-225

Investigation of Effect of Manufacturing and Test Equipment Variables on X-Band Characteristics of Bell System Thermistors, November 26, 1943. 14-227

The Investigation of the Effect of Manufacturing and Test Equipment Variables on the X-Band Characteristics of Bell System Thermistors, January 21, 1944. 14-255

The Fixed Tuned Broad-Band Transmitter Disconnect Switch, Some Preliminary Considerations, March 28, 1944. 14-261

The Investigation of the Effect of Manufacturing and Test Equipment Variables on the X-Band Characteristics of Bell System Thermistors, May 27, 1944. 14-281

High-Power Series Gaps, Progress Report, September 5, 1944. 14-316

High-Power Series Gaps, Bimonthly Report, November 7, 1944. 14-359

Development of High Back-Voltage Germanium Rectifiers, Interim Report No. 1, November 21, 1944. 14-374

High-Power Series Gaps, January 15, 1945. 14-398

Germanium Crystal Rectifier for Radar Receivers and Indicator Circuits, Interim Report No. 2, December 16, 1944. 14-399

WESTERN ELECTRIC COMPANY (Continued)

Final Report on Broad-Band TR and Anti-TR Tubes, September 30, 1944. 14-402

High-Power Series Gaps, Bimonthly Report for January and February, 1945, March 13, 1945. 14-414

Final Report on the Development of Magnetron Generators of High-Power and of Short Wavelengths, January 10, 1945. 14-431

High-Power Series Gaps, Bimonthly Report, March and April 1945, May 7, 1945. 14-438

Germanium Crystal Rectifier for Radar Receivers and Indicator Circuits, Interim Report No. 2, March 13, 1945. 14-441

Magnetrons and Detector, Beat-Oscillator Receivers, Record of Material Furnished. 14-450

The Investigation of the Effect of Manufacturing and Test Equipment Variables on the X-Band Characteristics of Bell System Thermistors, June 19, 1945. 14-457

Investigation of the Effect of Manufacturing and Test Equipment Variables on the X- and K-Band Characteristics of the Bell System Thermistors, July 30, 1945. 14-462

High-Power Series Gaps, Bimonthly Report, July 9, 1945. 14-468

High-Power Series Gaps Having Sintered Iron Sponge Manganese Cathodes, October 1, 1945. 14-488

Heat Treatment of Germanium Rectifier Materials, Interim Report No. 4, August 3, 1945. 14-506

Preparation of High Back-Voltage Germanium Rectifiers. 14-555

WESTINGHOUSE ELECTRIC AND MANUFACTURING CO.

Long-Range Navigation Equipment, Microwave Committee Project No. 3. 14-88

Report on Pulse Tube Development, May 15, 1942. 14-105

Report on Enclosed Pressure Gaps, December 31, 1942. 14-150

Technical Report on E-Band Magnetron, May 22, 1944 and Supplement, August 21, 1944. 14-299

Development of Series Spark Gaps for the Period January 1, 1943 to June 30, 1944, August 14, 1944. 14-327

Final Report, Transformer Model Shop, December 29, 1944. 14-382

Transformer Model Shop at Sharon, Pa., June 25, 1945. 14-454

Double-Triggering and Voltage Balancing for Series Gaps. 14-493

Development of Series Spark Gaps, Final Report, July 12, 1945. 14-494

WILLCOX & GIBBS SEWING MACHINE COMPANY

Development and Construction of Equation Solvers for GCI and SCI Radar Trainers, Technical Report. 14-442

ZENITH RADIO CORPORATION

Preliminary Instructions for Experimental HRY Equipment. 14-380

CONFIDENTIAL

PART V

AUTHOR INDEX OF RADIATION

LABORATORY REPORTS

- Abbenhouse, R. P. *Performance Characteristics of Army-Navy Preferred Type Elvtronic Cuthmle-Ray Tubes*, July 6, 1944. RL-588
Description and Operation of the General Purpose Variable Delay Unit, Mar. 26, 1946. RL-891
Operating Instructions for Sweep Calibrator, Model B, Dec. 7, 1944. RL-M-188
et al. Operating Instructions for the Model G Synchronizer, Mar. 15, 1945. RL-M-195A
Operating Instructions for Radiation Laboratory Model 5 Synchroscope, July 26, 1945. RL-M-212
Operating Instructions for Sweep Calibrator Model B-212, June 20, 1945. RL-M-223
Abbiati, O. *Wave Form Analysis*, May 29, 1944. RL-561
Abern, C. R., *et al. A Voltage Compensated Delay Multiplier*, Mar. 15, 1943. RL-334
Butterfly Moving Vehicle Detector AN/APS-26, Feb. 15, 1946. RL-1021
Alexander, R. M., *see* Ramsey, N. F., *et al.* RL-24
3-Cm System Group Report, July 5, 1941. RL-25
Flight Tests of Black I Relay Radar System, Apr. 24, 1945. RL-727
Beacon Tests with AN/APS-6, June 2, 1944. RL-S-16
Flight Tests on AN/APS-6A, Nov. 30, 1944. RL-S-25
Alley, R. E. Jr., *see* Keary, T. J. RL-266
Allis, W. P. *Theory of the Magnetron Oscillator*, Oct. 1, 1941. RL-122
Theory of Space-Charge in an Oscillating Magnetron, July 1, 1942. RL-176
Allred, C. M., *et al. Off-Frequency C-W Jamming*, Mar. 22, 1946. RL-910
Alvarez, L. W. *Report of the System Group*, Jan. 30, 1941. RL-28
Microwave Linear Radiators, July 31, 1942. RL-366
Ames, L. A., *et al. Instructions for Modifying the SCR-584 Modulator for Use in Aspen Transmitters*, Jan. 25, 1944. RL-M-155A
Andrew, M. M., *et al. Radar Comouflage*, July 16, 1945. RL-766
Arenberg, D. L. *Supersonic Solid Delay Lines*, Apr. 30, 1946. RL-932
Arnold, R. D. *A Method of Compensating the Frequency Dependence of Attenuation in a Supersonic Delay Line*, Dec. 27, 1945. RL-945
Aron, W. *Waveguide Motional Joints*, Jan. 18, 1946. RL-1037
Ashbrook, F. M., *see* Smith, S. A. RL-1032
et al. Some General Microwave Anti-Jam Design Considerations and Performance of a Special Receiver, Feb. 21, 1944. RL-S-8
Ashby, R. M., *see* Rollefson, R. RL-363
et al. Corner-Reflector Modulation of Airplane Signals, Mar. 28, 1946. RL-913
et al. Modulation of Radar Signals from Airplanes, Mar. 28, 1946. RL-914
et al. Pulse Length Selector and Multiple Pulse Decoder, Mar. 21, 1946. RL-917
Austin, J. M., *et al. Qualitative Survey of Meteorological Factors Affecting Microwave Propagation*, June 1, 1944. RL-488
Austin, P., *et al. Tables of Fourier Transforms of Fourier Series, Power Series, and Polynomials*, Aug. 30, 1945. RL-S-58
Babish, R. C., *see* Bagley, D. RL-S-66
Bacher, R. F., *see* Nottingham, W. B. RL-309
Signal-to-Noise Measurements on Receivers, Sept. 29, 1941. RL-108
Bagley, D. *Regular Report on the Components Testing System*, Dec. 17, 1941. RL-43
Bagley, D. G., *et al. Type Test of the Fairchild Radar Recording Camera*, Oct. 30, 1945. RL-S-66
Bailey, E. M. *The Angular Alignment of Radar Antennas*, Mar. 29, 1946. RL-950
Bailey, F., *see* Kuper, J. B. H. RL-290
Bailey, F. S. *Characteristics of the Present Production of McNully Tubes*, June 3, 1943. RL-303
et al. Characteristics of Recent 723A Tubes (X-Band Local Oscillators), Sept. 4, 1943. RL-427
et al. Characteristics of Recent 723A/B Tubes, May 18, 1944. RL-570
et al. Characteristics of Preproduction 2K45 Tubes, Oct. 29, 1945. RL-821
Bailey, H. H. *Statistics of Beacon Interrogation*, Feb. 5, 1945. RL-602
Final Report on BIFX, Apr. 8, 1946. RL-1054
Bainbridge, K. T. *Interim Report of the Problems and Activities of Group G*, Jan. 12, 1942. RL-30
Considerations Affecting Choice of Wavelength, Sept. 24, 1941. RL-120
Bales, P. D. *Test Set for Raytheon Service Modulation*, Nov. 5, 1941. RL-76
See Gaffney, F. J. RL-75
et al. Preliminary Report on the Fluctuations of Radar Signals, May 16, 1944. RL-569
Balmer, R. F., *see* Larson, R. W. RL-378
See Ramsey, N. F. RL-381

CONFIDENTIAL

- Balsbaugh, J. C., et al. *Moisture-Proofing of Balloon Mica Capacitors*, July 31, 1945. RL-700
- Baltzer, O. J., et al. *Overwater Observations at X and S Frequencies on Surface Targets*, July 26, 1943. RL-401
- et al. *Polarization Studies at S and X Frequencies*, Mar. 14, 1944. RL-536
- et al. *Observations on Signal Stability at S and X Frequencies*, Mar. 14, 1944. RL-537
- See Andrew, M. M. RL-766
- Banks, F., see Hagler, D. L. RL-M-210
- Bañon, A., Jr. *Theory of Ringing Time of Tunable Echo Boxes*, Nov. 3, 1944. RL-639
- Design of an Improved X-Band Echo Box*, Dec. 7, 1944. RL-631
- et al. *An Electronic Modulator for CW Magnetrans*, June 26, 1945. RL-748
- Barker, C. B., et al. *Streamlined Microwave Omnidirectional Antennas*, Jan. 8, 1946. RL-871
- et al. *Reflections from Curved Surfaces*, Feb. 1, 1946. RL-976
- Barry, F. N. *Three-Tone PPI*, Mar. 20, 1946. RL-934
- Bartelink, E. H. B., et al. *Bombing Errors*, Feb. 16, 1944. RL-530
- Overland Falcon*, Feb. 7, 1945. RL-647
- AN/APG-13B, Future*. Div. 14-323.2-M12
- Letters Discussing ASP-25 and Related Ideas Concerning Ash*. Div. 14-323.2-M14
- Baur, H. W. *Relay Data Including Shock and Vibration Measurements*, Aug. 1, 1945. RL-747
- Beers, D. S., et al. *Electronic Tuning of Reflex Oscillators*, Aug. 1, 1945. RL-774
- See Bailey, H. H. RL-821
- Beers, Y. *A 40-Mc Schering Bridge*, May 12, 1943. RL-301
- Noise from Local Oscillators*, June 8, 1943. RL-304
- See Brenneke, W. M. RL-294
- et al. *The Effect on Noise Figure of Placing the Gain Control on the First I-F Stage*, Mar. 9, 1944. RL-528
- A 50-Mc Parallel Schering Bridge*, Apr. 22, 1944. RL-558
- Receiver Noise Figures and Their Measurement*, July 2, 1945. RL-740
- Bekkar, H. B. *Preliminary Technical Manual for SCR-584 MTI Modification Kit No. MC-643-AS and Fan Beam Search Antenna*, June 1, 1945. RL-M-218
- Bell, P. R., Jr., see Ashbrook, F. M. RL-S-8
- Bender, R. S., et al. *An Aerial Investigation of K-Band Radar Performance under Tropical Atmospheric Conditions*, Oct. 1, 1945. RL-729
- Benfield, A. R., et al. *On the Theory and Performance of Liquid Delay Lines*, Aug. 31, 1945. RL-792
- Bennett, S. D. *A Report on ASD-1 B-Scope Photography*, Sept. 24, 1943. RL-439
- et al. *Video Stretching as a Method for Improving X-Band Beacon Reception*, Aug. 31, 1944. RL-601
- Preliminary Report on Single Aircraft Target Ranges of AEW*, Jan. 27, 1945. RL-S-37
- PPI Photographs from AEW*, July 5, 1945. RL-S-51
- Bennett, S. D., (Continued)
- Supplementary Report on Aircraft Target Ranges of AEW*, Apr. 26, 1946. RL-S-65
- Bent, A. E. *Radar Echoes from Atmospheric Phenomena*, Mar. 13, 1943. RL-173
- Climate in Relation to Microwave Radar Propagation in Panama*, Feb. 25, 1944. RL-476
- Radar Echoes from Precipitation Layers*, Aug. 20, 1945. RL-689
- Echoes from Tropical Rain on X-Band Airborne Radar*, June 15, 1945. RL-728
- See Bender, R. S. RL-729
- et al. *Effects of Clouds and Rain on K-Band Airborne Radar*, Aug. 1, 1945. RL-780
- Berg, A., see Kellner, R. RL-338
- Berger, R., see Pound, R. V. RL-238
- Beringer, E. R. *Low-Level Crystal Detectors*, Mar. 16, 1943. RL-297
- Crystal Detectors and the Crystal-Video Receiver*, Nov. 16, 1944. RL-638
- The Absorption of One-half Centimeter Electromagnetic Waves in Oxygen*, Jan. 26, 1945. RL-684
- See Dicke, R. H. RL-1002
- Berman, E. *Low-Level Crystal Detectors, Effect of Heat and Cold*, Nov. 19, 1943. RL-440
- Berman, M. *AN/APS-31 Antenna*, Feb. 26, 1946. RL-1068
- Best, R. L., et al. *Improved R-F System for the Transmitter-Receiver Unit of the APQ-13*, Apr. 15, 1946. RL-905
- Bethe, H. A. *Theory of Diffraction by Small Holes*, Jan. 23, 1942. RL-128
- Theory of High Frequency Rectification by Silicon Crystals*, Oct. 29, 1942. RL-184
- Theory of the Boundary Layer of Crystal Rectifiers*, Nov. 23, 1942. RL-185
- Lumped Constants for Small Irises*, Mar. 24, 1943. RL-104
- Formal Theory of Wave Guides of Arbitrary Cross Section*, Mar. 16, 1943. RL-198
- Theory of Side Windows in Wave Guides*, Apr. 4, 1943. RL-199
- Excitation of Cavities through Windows*, Apr. 9, 1943. RL-202
- Bettler, P. C. *Model 6 Modulator Performance Tests*, Apr. 22, 1944. RL-549
- Modulator for AN/TPS-10 Radar*, Jan. 31, 1946. RL-997
- Instruction Manual for Model 6-R (MKW) Modulator*, Nov. 29, 1943. RL-M-139
- Instruction Manual for Model 6 Modulator*, Feb. 18, 1944. RL-M-153
- Elrhard, B. L. *S-Band End-Fire Array Antenna*, July 11, 1944. RL-577
- Preliminary Maintenance and Operating Instructions for AN/APX-15*, Mar. 1, 1945. RL-M-200
- Preliminary Maintenance and Operating Instructions for the TS-364/APX-15 Test Set*, Apr. 4, 1945. RL-M-202
- Blackburn, J. F., et al. *Tests of Aided Tracking with PPI*, Sept. 25, 1945. RL-707

CONFIDENTIAL

- Blackmer, L. L. *P41 (Photographic Projection PFI)*,
Apr. 26, 1945. RL-725
MEW No. 1 Preliminary Instruction Book, Mar.
14, 1944. RL-M-156A
MEW No. 2 Preliminary Instruction Book, Mar.
14, 1944. RL-M-156B
MEW No. 3 Preliminary Instruction Book, Mar.
9, 1944. RL-M-156C
Instruction Handbook for Radar Set AN/CPS-1A
(Pre-production Sets), May 15, 1944. RL-M-156D
- Blaisdell, D., see Bailey, F. RL-427
- Blaney, B. *Report on K-Band Work in U.S.A.*, Oct.
20, 1944. RL-475
- Blue, R. W., et al. *Vertical Coverage of a 1 1/2-Ft x 5-Ft
Antenna Designed for SG-3 (Experimental Data
Obtained with an SNR Aircraft as Target)*, Dec. 7,
1944. RL-636
et al. *Anti-aircraft Target Designation Equipment
for Ships*, Dec. 19, 1944. RL-640
Range-Altitude Coverages of Shipborne Microwave
Search Radars, July 2, 1945. RL-741
A Discussion of Plotting Devices for PFI's, Apr.
3, 1946. RL-1038
- Blythe, B. H., et al. *Colloquium on Pulse-Forming Net-
works*, Oct. 12, 1944, Mar. 14, 1945. RL-692
The AN/APS-33, Feb. 28, 1946. RL-763-3
- Boas, M. *Pre-flight Check of Radar Set AN/APQ-7*,
Sept. 25, 1945. RL-M-219
Preliminary Instructions for Radar System MK
35, Nov. 30, 1945. RL-M-240
Preliminary Instructions for Radar Set AN/APG-
13R, Sept. 15, 1945. RL-M-246
Pre-flight Check of Radio Set AN/APQ-7, June 15,
1945. RL-S-54
- Bogert, B. P., et al. *History of AN/APG-5, ARO*.
Div. 11-323.11-M4
RL-261
- Bohnert, J. L., see Krutter, H.
et al. *SU-2 Antenna, Shipborne Stabilized Radar
Antenna for Sea Search*, Mar. 7, 1945. RL-659
et al. *SU-2 Antenna, Line-of-Sight Stabilization
of a Radar Beam by Reflector Tilt*, Feb. 19, 1945.
RL-660
et al. *Stabilized SG-3 Antenna*, Feb. 7, 1945.
RL-665
et al. *Airborne Early Warning Search Antenna*,
Aug. 30, 1945. RL-779
Cindy Antenna, A High Resolution K-Band Radar
Antenna for Sea Search, Nov. 1, 1945. RL-849
- Bonner, T. W. *Some Factors Governing the Range of
AI Sets*, May 3, 1944. Informal RL-91
- Bostick, V. *Radar Bombing Techniques*, Apr. 30, 1946.
RL-S-59
- Bostick, W. H. *Peak Currents from Carbonized Thor-
iated Tungsten Cathodes*, Mar. 20, 1942. RL-73
Report on Some Tubes Used in Hard Tube Modu-
lators, May 19, 1942. RL-211
Pulse Transformers, June 1, 1943. RL-217
Oscilloscope Presentation of Hysteresis Loops at
60 Cycles and under Pulse Conditions, June 1, 1943.
RL-218
- Bostick, W. H. (Continued)
Test Equipment for Pulse Transformers, June 1,
1943. RL-219
A 10-20-Centimeter Balometer, Aug. 26, 1942.
RL-288
Noise Measurements on Microwave Converters,
Sept. 15, 1942. RL-289
Performance of the GL446 Lighthouse Tube as an
RF Amplifier in the 10-20-cm Region, Oct. 5, 1942.
RL-291
Use of Temperature-Limited Diode in Measure-
ments of Noise Figures of Crystals, Feb. 27, 1943.
RL-294
Notes on Measurement of Noise, Gain and Noise
Figure of Converters, Jan. 30, 1943. RL-295
Leakage Inductance and Distributed Capacitance
of Various Types of Pulse Transformer Windings,
Nov. 22, 1943. RL-463
Pulse Transformer Core Material Measurements,
Dec. 10, 1943. RL-470
Effect on Current Pulse of Resistance in Series
with the Magnetron, Feb. 21, 1944. RL-527
The Evaluation of an Equivalent Circuit for a
Pulse Transformer, May 8, 1944. RL-545
Analysis of the Influence of Pulse Transformers on
Current Pulse Shape, June 16, 1944. RL-546
Energy Loss in Copper under Pulse Conditions,
Dec. 22, 1944. RL-619
Pulse Transformer Committee Standard Test Meth-
ods for Pulse Transformer Cores, May 5, 1945.
RL-722
- Bothwell, F. E., et al. *Data Smoothing*, Jan. 23, 1945.
RL-673
See Dillinger, J. B. RL-682-2
et al. *A Theoretical Treatment of Radar Target
Return*, Aug. 31, 1945. RL-719
Equivalent Network for the 202-RF Pulse Trans-
former Based on the Method of Virtual Displace-
ments, July 2, 1945. RL-734
et al. *Analysis of a Half-Wave Rectifier Circuit
Involving Inductance, Resistance, and Capacitance*,
Dec. 26, 1945. RL-867
et al. *A Method for Calculating Magnetron Reso-
nant Frequencies and Modes*, Feb. 8, 1946. RL-1039
The Effect of Small Changes in Circuit Parameters
on the Solution of Network Problems, Jan. 14, 1946.
RL-1063
- Boyd, C. D. *Analysis of the Tracking of the 584
X-Band System*, June 12, 1945. RL-753
See Phillips.
Brady, J. J. *Antenna Catalogue*, Oct. 8, 1945. RL-S-64
Braunlich, A. *Half Beacon Antenna*, Sept. 6, 1943.
RL-419
- Breen, J. W., et al. *The Manual Plotting System RC-
305*, Aug. 31, 1945. RL-S-62
Breen, S. *3 cm Balometer Detector Suitable for Field
Measurements (Type Y)*, Dec. 11, 1942. RL-262
et al. *Antenna Feeds for 3/4" Stub-Supported Co-
axial Line*, June 21, 1943. RL-271

- Right, A. A., et al. *A Production Analysis of the Wartime Radio and Radar Industry*, Nov. 1, 1944. RL-S-31
- Drillouin, L. *Theory of the Split Anode Magnetron*, Jan. 7, 1942. RL-127
- Brown, A. H. *Radar R-F Test Points*, Dec. 15, 1945. RL-S-68
- The So-called Standard Target*, Mar. 10, 1945. RL-S-43
- Brown, P. F., see Hughes, V. W. RL-335
- et al. *A/R Range Scope*, June 29, 1945. RL-755
- Pulsed Quartz-Crystal Oscillator*, Aug. 21, 1945. RL-803
- Brunette, G. E. *Preliminary Instructions on Modification Kit MC-627 for Radio Set SCR-584*, May 1, 1944. RL-M-220
- Preliminary Instructions on Modification Kit MC-627 for Radio Set SCR-584 (Revised)*, Nov. 28, 1945. RL-M-220B
- Ruchwalter, L., et al. *LRASV (AN/APA-2) Antenna*, Oct. 13, 1943. RL-415
- et al. *Rotating Corrugated Eccentric Line Antennas*, June 13, 1944. RL-531
- Buck, J. G., et al. *Cathodes for Pulsed Magnetrons, Part I, Correlations Between Oscillating and Diode Conditions*, Aug. 30, 1944. RL-609
- et al. *Cathodes for Pulsed Magnetrons, Part II, Construction and Performance of Pulsed Cathodes*, Jan. 31, 1945. RL-683
- See Eisenstein, A. S. RL-933
- Buck, J. H. *Beacon Discrimination Circuit*, RL-29
- Rumer, C. T. *Range and Tracking Accuracy of AN/APG-15B*, Mar. 25, 1946. RL-875
- Burgoyne, R. H. *Nomograms for Computation of Modified Index of Refraction*, Apr. 6, 1945. RL-551
- et al. *Modified Index Distribution Close to the Ocean Surface*, Feb. 16, 1945. RL-651
- Butt, C. *Effects of Line and Cathode-Follower Terminations on Pulse Shape*, Sept. 11, 1944. RL-616
- Cady, W. M. *The Balancing of Spiral-Scan Spinners*. RL-380
- Search Scans and System Performance*, Aug. 9, 1943. RL-407
- Nomograms for Radar Bombing with the 100-lb Practice Bomb M38A2*, Aug. 29, 1944. RL-614
- Stable Scanners and Unsteady Airplanes*, Feb. 21, 1945. RL-701
- et al. *The AN/APQ-13 (60°) Scanner in B-29 Airplanes*, Oct. 29, 1945. RL-848
- The AN/AP8-23 Antenna and Installation*, Jan. 10, 1946. RL-878
- Caldwell, W. C. *X-Band Bandpass TR Tube*, Jan. 22, 1946. RL-970
- Campbell, E. J. *Analysis of Firing Tests on Mork 51, Dam Neck, Virginia*. RL-371
- Radar Tracking Analysis*, Feb. 5, 1944. RL-495
- Analysis of Over-Water Tracking*, Feb. 12, 1945. RL-695
- Carlson, B. C., et al. *Alignment Procedure for Cadillac Airborne Synchro System*, June 28, 1945. RL-M-226
- Carlson, J. F., S. A. Goudsmit. *Microwave Radar Reflections*. RL-195
- Carmody, W. R. *Preliminary Handbook of Instructions for H2X Supersonic Trainer, Mark III*, Sept. 30, 1944. RL-M-157B
- Handbook of Instructions for the Preparation of Maps for the H2X Supersonic Trainer*, September 1944. RL-M-181
- Preliminary Handbook of Instructions for Supersonic Trainer, AN/APQ-7-T1 (Eagle Trainer)*, June 14, 1945. RL-M-189
- Handbook of Instructions for the Preparation of Mountain Maps for the H2X Supersonic Trainer*, April 1945. RL-M-205
- et al. *Preliminary Description of the MK 56 Gun Fire Control System*, Dec. 15, 1945. RL-M-242
- Caswell, A. E. *Handbook of Instructions for Radio Set AN/APA-9 (Pre-production Sets) (Complete Edition)*, February 1944. RL-M-148C
- Preliminary Handbook of Instructions for H2X Supersonic Trainer, Mark II*, April 1944. RL-M-157A
- Handbook of Maintenance Instructions for CXGQ Radar Set*, Mar. 15, 1945. RL-M-168
- Preliminary Technical Manual for AEW*, Dec. 4, 1944. RL-M-180A
- Theory of Operation of AEW Circuits*, Apr. 15, 1945. RL-M-201
- Handbook of Maintenance Instructions for AN/APG-13-T1 Trainer*, June 23, 1945. RL-M-221
- Cefola, M., et al. *An Application of the Pulse Technique to the Measurement of the Absorption of Supersonic Waves in Liquids*, Mar. 30, 1946. RL-963
- Certaines, J. *Beam Shaping*, Apr. 10, 1946. RL-1069
- Chaloff, R. S., et al. *Design Proposal for AN/APN-19A Check Set*, Mar. 27, 1946. RL-1082
- Chance, R. *Precision Timing Calibrator and Range Measuring System*, May 12, 1943. RL-319
- Medium Precision Self-Synchronous Range Circuit Model*, May 28, 1942. RL-321
- Circular-Sweep Precision Range System*, July 8, 1942. RL-322
- Simplified Circular Sweep Range System*, Sept. 10, 1942. RL-325
- Antiaircraft Artillery Board Test on the Simplified Circular-Sweep Range*, Dec. 1, 1942. RL-326
- Hand Radar Ranging Circuit*, Jan. 8, 1943. RL-327
- Model II Calibrator*, Apr. 1, 1943. RL-333
- Delayed Sweep for SCR-582-X*, June 11, 1945. RL-337
- See Ahern, C. R. RL-334
- See Grass, A. M. RL-324
- See Hite, G. RL-329
- See Jacobsen, A. R. RL-341
- See Kelner, R. RL-338
- See MacNickol, E. F., Jr. RL-323
- See Reed, H. J. RL-342
- See Reed, H. J. RL-343
- Special Report on Balometer Blind Landing System*, Dec. 15, 1941. RL-7
- Precision Delay Multivibrator for Range Measurement*, June 1, 1942. RL-320

CONFIDENTIAL

Chance, B. (Continued)

- Ground Position Indicator for Radar Navigation and Bombing, June 2, 1944. RL-8-19
- Chisholm, E. B., et al. K-Band Linear Array, Jan. 31, 1946. RL-771
- et al. Double Reflector Antenna for High-Altitude Bombing, July 16, 1945. RL-775
- et al. K-Band Antenna for High-Altitude Bombing, Dec. 26, 1945. RL-789
- See Austin, F. RL-8-58
- Chu, L. J. Transmission Through Dielectric, Dec. 11, 1940. RL-113
- Theory of Radiation from Paraboloidal Reflectors, Feb. 12, 1941. RL-114
- Radiation Resistance of Antennas Inside Waveguides of Arbitrary Cross Sections, July 3, 1942. RL-177
- See Frank, N. H. RL-179
- See Stratton, J. A. RL-123
- et al. T-Junctions in Rectangular Waveguides, Part II, Final Formulas and Curves, July 19, 1942. RL-180
- et al. A Simplified Search Antenna for Radar Set AN/MPN-1, Jan. 1, 1945. RL-486
- Chubb, C. F., Jr. Final Report on SMTR (January 1944), June 13, 1944. RL-559
- Reconnaissance the AN/APG-15 Antenna Assembly, Apr. 23, 1946. RL-1009
- Clapp, R. E. Probe-Fed Slots as Radiating Elements in Linear Arrays, Jan. 25, 1944. RL-455
- A Theoretical and Experimental Study of Radar Ground Return, Apr. 10, 1946. RL-1031
- Clark, M., see Reed, J. RL-255
- Clarke, H. F., et al. Experiments in Microwave Breakdown, Nov. 28, 1945. RL-741
- et al. Summary of High-Power Breakdown Tests on Microwave Components, Jan. 10, 1946. RL-1071
- Clogston, A. M. Japanese Microwave Radar, Aug. 26, 1944. RL-8-24
- Close, R. N. An H + B Impact Predicting Computer Assuming Constant Indicated Airspeed for Use with AN/APG-15A Radar, June 23, 1944. RL-581
- Coffin, F. P., see Jacobson, A. B. RL-341
- See Bothwell, F. E. RL-673
- Cohen, M. J. Synchroscope Handbook (Model SYN-15), December 1943. RL-M-147
- Cohen, S. B. H-3 Trigger Unit, Feb. 23, 1945. RL-645-3
- The I-3 Signal Unit, May 23, 1945. RL-645-4
- The H-2 Trigger Unit, Aug. 7, 1945. RL-645-6
- I-2 Signal Unit, Aug. 30, 1945. RL-645-7
- The SP "Feed-In" Trainer, Apr. 10, 1946. RL-928
- Cole, P. A., see Kuper, J. B. H. RL-290
- et al. Various 3-Cm TR Box Characteristics, Jan. 6, 1943. RL-166
- Lighthouse Tube Anode Contacts, Jan. 19, 1943. RL-202
- Measurements on 446 "Lighthouse" Tubes, Aug. 30, 1943. RL-413
- et al. Lighthouse R-F Envelope Indicator, Apr. 7, 1944. RL-542

Cole, P. A. (Continued)

- G.E. GL2C40 Tant Grid Lighthouse Tubes, Nov. 14, 1944. RL-600
- et al. A Proposed Standard Test Cavity for the 705B Tube, Mar. 15, 1945. RL-693
- Collins, G. B. Note on Design of Magnetrons, Feb. 9, 1942. RL-88
- et al. Special Report of Characteristics of 3-Cm Magnetrons and Instructions for Their Operation, Dec. 10, 1941. RL-87
- et al. Guide to the Operation of 10-Cm Standard Magnetrons, Oct. 20, 1941. RL-86
- Connelly, C. M., Lt. J. B. Higley. The ML-1A, ML-1B, and ML-3A Course Mechanisms, Nov. 28, 1945. RL-645-9
- Cook, J. E., J. E. Richardson. S-Band Tunable Systems, Mar. 21, 1946. RL-911
- Coomes, K. A., see Buck, J. G. RL-609
- See Ruck, J. G. RL-683
- Memorandum on the Activation of Various Surfaces by Evaporation from a Heated Oxide Cathode, May 11, 1945. RL-718
- See Eisenstein, Mar. 30, 1946. RL-933
- Cork, B. Maximum Power Limitations of Silicon Crystals, Jan. 11, 1943. RL-359
- Transmission of Higher Harmonics through a TR Cavity, Jan. 11, 1943. RL-361
- Same Experiments in Determining the Power Transmission and Recovery Time of TR Boxes, Jan. 20, 1943. RL-362
- Shielding of Microwave Receivers against Interference at Intermediate Frequencies, Aug. 8, 1944. RL-471
- Coram, D. R., see Havens, B. L. RL-35
- Counter, V. A., see Baltzer, O. J. RL-401
- Cowan, E. W. Reduction of the Effects of Ground Clutter on SCR-750, June 7, 1945. Informal RL-01
- Altitude Return in the AN/APG-6, Mar. 26, 1945. RL-706
- Sea-Return Effects and Their Elimination in the AN/APG-6, June 11, 1945. RL-707
- Tests of a Type C Data Presentation with a Spical-Sound Aircraft-Interception System, July 8, 1945. RL-767
- X-Band Sea-Return Measurements, Jan. 10, 1945. RL-870
- Crout, P. D., see O'Neal, R. D., May 14, 1943. RL-203
- A Method of Virtual Displacements for Electrical Systems with Applications to Pulse Transformers, Oct. 6, 1944. RL-618
- An Extension of Lagrange's Equations in Electromagnetic Field Problems, Equivalent Networks, Oct. 6, 1944. RL-620
- et al. A Treatment of Echo Box Problems by Lagrangian Procedures, Jan. 13, 1945. RL-629
- See Bothwell, F. E. RL-073
- et al. A Treatment of Echo Box Problems by Lagrangian Procedures, Part II, Mar. 16, 1945. RL-698
- See Bothwell, F. E. RL-719
- See Bothwell, F. E. RL-807

CONFIDENTIAL

- Craut, P. D. (Continued)
 See Bathwell, F. E. RL-1039
An Extension of Lagrange's Equations to Electromagnetic Field Problems, Equivalent Networks, Part II, Jan. 15, 1946. RL-1046
The Determination of Fields Satisfying Laplace's, Poisson's, and Associated Equations by Flux Plotting, Jan. 23, 1946. RL-1047
A Flux Plotting Method for Obtaining Fields Satisfying Maxwell's Equations, with Applications to the Magnetron, Jan. 16, 1946. RL-1048
A Theoretical Treatment of Radar Target Return, Part II, Dec. 20, 1945. RL-1049
et al. A Procedure for Statistical Analysis of Depth Soundings, July 29, 1944. RL-8-21
Shock Mounting and Vibrations, May 18, 1944. RL-T-16
- Cunningham, F., *et al. A Moving Target Selector Using Deflection Modulation on a Storage Mosaic*, June 6, 1944. RL-562
Entitled Limitations of Kit MC-642 MTI for SCR-584, June 18, 1945. Informal RL-65
- Cunningham, J. M., *see* Whitmer, R. M. RL-358
- Curran, G. W., *see* West, C. F. RL-377
et al. Tests of AGI-1 Installed in Tail of B-24D Airplane, Mar. 5, 1943. Informal RL-94
- Curtis, B. R. *PPI Off-Center Conversion Kit (MX 364/CPS)*, Aug. 1, 1945. RL-778
- Czapek, E. L., *et al. The Cooling of Pressure-Tight Containers*, Mar. 14, 1944. RL-462
- Davenport, L. L., *et al. Theory and Design of Guided Missiles Control System AN/APW-3*, Apr. 8, 1946. RL-1028
Preliminary Instruction Manual for Echo Box for SCR-584, Mar. 6, 1944. RL-M-159
- Davis, L., Jr. *Radar Components that Affect Range*, Dec. 10, 1945. RL-8-73
- DeAmicis, K. *Frequency-Wavelength Conversion Tables*, Jan. 4, 1945. RL-652
- Dearnley, I. H., *see* McMillan, F. L. RL-895
- Deerhake, W. J., *et al. Operational Procedure for AN/APA-5*, Oct. 26, 1945. RL-8-67
- Dehn, R. A. *Tuning the RF Components of a System (Lawson Technique)*, Feb. 20, 1942. RL-11
- Dewey, G. C., *see* Vitter, A. L., Jr. RL-1005
- Dieke, R. H. *A Reciprocity Theorem and Its Application to Measurement of Gain of Microwave Crystal Mixers*, Apr. 13, 1943. RL-300
See Roberts, S. RL-26
et al. Theory of Radar Mixers, July 15, 1942. RL-287
The Measurement of Thermal Radiation at Microwave Frequencies, Aug. 22, 1945. RL-787
et al. The Absorption of Atmospheric Water-Vapor in the K-Band Region, Jan. 15, 1940. RL-1002
A Continuously Indicating Audio Spectroscope for C-W Systems, Dec. 30, 1943. Informal RL-01
- Dickinson, A. B. *S₁ 6-6 Horizontally Polarized Antenna*, Nov. 30, 1945. RL-823
- Dickinson, A. B. (Continued)
Dis-Cast Model of the CSE Antenna, Nov. 30, 1945. RL-824
Buzz-Bomb Antennas, Nov. 30, 1945. RL-825
- Dickinson, D. J., *et al. Maintenance Manual for the AN/APN-7 System Modified for the S₀ Band*, June 12, 1944. RL-M-170
et al. Description of the Experimental ROSEBUD, Oct. 26, 1944. RL-M-184
et al. Maintenance Manual for Model AN/APN-21XR Rucan, Apr. 11, 1945. RL-M-213
- Dickinson, R., *see* Hollingsworth, L. M. RL-1020
- Dillinger, J. R., *see* White, H. J. RL-209
Dissipation in Series Gaps and Voltage-Current Relationships during the Discharge, Aug. 31, 1945. RL-682-1
et al. Division of Voltage Across Series Spark Gaps in a Line Type Modulator, Dec. 11, 1945. RL-682-2
General Characteristics of Enclosed Spark Gaps with Emphasis on Aluminum Cathode Type Series Gaps, Jan. 30, 1946. RL-682-3
Some Characteristics of the 1B41, 1B45, and 1B49 Series Spark Gaps, Mar. 10, 1946. RL-682-4
Operation of Sintered Iron Sponge-Mercury Cathode Type Series Gaps at SCI, AKW, and 5 Microsecond Conditions, Jan. 16, 1946. RL-682-5
Line Type Modulator and IIT 10V Magnetron Operation at 6 Megawatts, Jan. 11, 1946. RL-682-6
- Dillon, R. E., *et al. Compact Horns Intermediate Between Polygons and Reflectors*, Jan. 31, 1946. RL-961
- Dodson, A. H., *see* Hutner, R. A. RL-21
See Hutner, R. A. RL-22
See Hutner, R. A. RL-23
- Dodson, H. W., *et al. Field Intensity Contours in Generalized Coordinates*, May 2, 1945. RL-702
See Furry, W. H. RL-795
- Dole, F. E. *Life Test of Contact Material on Standard Linear Wire-Wound Potentiometers*, Mar. 12, 1946. RL-617
- Donovan, A. C. *Measurement and Design of D. C. Resonant Choking Chokes*, Nov. 23, 1942. RL-215
AN/APIS-30 Modulator Status, Jan. 17, 1946. RL-1000
Operating Instructions for Model 12 Modulator, Sept. 17, 1945. RL-M-239
- Doolittle, H. D., *see* Boatick, W. H. RL-211
See Dunnington, F. G. RL-77
- Dowker, C. H., *et al. Accuracy Criteria for the Gun Director Mk 56*, June 6, 1944. RL-578
Interference between SCR-584's Tracking APN-19 Beacons, Sept. 18, 1945. RL-816
- Dowker, Y., *et al. Radome Bulletin Number 10, The Measurement of Small Reflections*, Feb. 6, 1945. RL-483-10
et al. Radome Bulletin Number 14, An Investigation of R-F Probes, Feb. 6, 1946. RL-483-14
et al. Radome Bulletin Number 17, Current Progress on R-F Research, May 10, 1945. RL-483-17

CONFIDENTIAL

- Dowker, Y. (Continued)
Radiance Bulletin Number 19, Dielectric Constant and Loss Tangent Computation, Aug. 7, 1945. RL-483-19
Transmission of Lumpy Sandwiches, Jan. 23, 1946. RL-483-22
- Drake, D. T. *High-Frequency Characteristics of Resistors*, Mar. 9, 1944. RL-520
et al. Over-Water Tests of S-Band Early Warning for Ships. Vertical Coverage of the CNHR (SCI) Search System, Mar. 5, 1945. RL-703
- Droz, M. E., *et al. Radar Trainer Equation-Solvers for the Relative Motion of Two Moving Objects in Space*, June 20, 1943. RL-436
See Cefola, M. RL-963
- DuBridge, L. A. *Present Status of Radiation Laboratory*. RL-32
- Dunbar, A. S. *Antenna for High-Altitude Bombing (HAB)*, Aug. 3, 1943. RL-411
et al. A Low-Drag Beacon Antenna for Fighter Aircraft, Apr. 28, 1945. RL-685
See Chisholm, E. B. RL-789
Metal Plate Lens for Cas Antenna, Feb. 15, 1946. RL-1070
- Dunnington, F. G., H. D. Doolittle. *RF Envelope Indicator Instruction Manual*, Dec. 10, 1941. RL-77
A New Secondary Modulation Indicator, Mar. 25, 1946. Informal RL-45. Div. 14-242.12-M7
- Durand, E. *S/N Measurements on the CV-58*, Aug. 11, 1943. RL-416
Automatic Frequency Control for AN/APS-31/43, Jan. 17, 1946. RL-887
See Whitford, A. E. RL-888
AN/TPS-10B R-F Head Termination Report, Mar. 5, 1946. RL-889
- Duvall, G. P. *MTR Computing Radar Sight*, Apr. 10, 1944. RL-8-14
DOLPHIN, Remotely Controlled Torpedo Rack Actuating Mechanism, Aug. 29, 1944. RL-8-23
Alignment Kit (Torpedo Rack) Mark 1 Mod 0, Mar. 17, 1945. RL-8-42
Tables for Use with Torpedo Director Mark 33-1, June 29, 1945. RL-8-60
et al. Torpedo Director Mark 33 Mod 1, Nov. 30, 1945. RL-8-63
Project Dolphin, May 29, 1943. RL-385
- Dwight, R. *Radiation Laboratory Modulator Summary*, Nov. 1, 1945. RL-829
- Eaton, J. E., *et al. Quarter Wave Plate for Broad-Band Circular Polarization*, Jan. 28, 1946. RL-769
Dielectric Rod Endfire Antennas Close to Metal Surfaces, Jan. 23, 1946. RL-969
- Ehlers, F. E. *A Method of Measuring the S-Band Characteristic Impedance of Coaxial Cable*, Apr. 28, 1943. RL-252
Attenuation of RG-8/U Cable as a Function of Temperature and Frequency in the X-Band, June 18, 1945. RL-754
R. Rotary Joints for the 3 Centimeter Band, Dec. 4, 1945. RL-853
- Ehrenfried, A. D., *see* Carmody, W. R. RL-M-242
- Eisenstein, A. S., *see* Back, J. G. RL-683
et al. Metallic Hydride Studies, Dec. 7, 1945. RL-813
et al. Alkaline Earth Oxide Cathodes for Pulsed Tubes, Mar. 30, 1946. RL-933
- Embersom, R. M. *Regular Report on the USS Semmes 3,000-Mc Operations*. RL-51
Regular Report on the USS Semmes 3,000-Mc Operations. RL-52
Comprehensive Report on USS Semmes Radar Installation. RL-393
et al. A Navigational Radar for Naval Auxiliaries and Merchant Marine, Oct. 23, 1945. RL-876
A High Resolution Set, Jan. 26, 1944. RL-8-5
- Emalie, A. G. *Coherent Integration*, May 16, 1944. Informal RL-163. Div. 14-125-M8
et al. The Observation of R-F Phase in Pulse Radar, Dec. 23, 1943. RL-481
See Cunningham, F. RL-562
See Benfield, A. E. RL-792
Moving Target Indication on MEW, Feb. 19, 1946. RL-1080
- MTI Using Coherent Intermediate Frequency*, Aug. 22, 1945. Div. 14-263-M7
- Evans, J. E., *see* Rieke, F. F. RL-221
et al. Analysis of Magnetron Performance, Part II, Detailed Study of the Operation of a Magnetron, Mar. 3, 1944. RL-451
et al. R-F Phasing of Pulsed Magnetrons, Feb. 6, 1946. RL-1051
- Everhart, E. M. *Magnetron Strapping Wavelength Calculations*. RL-223
Strapping Tolerances for Magnetrons, Jan. 27, 1943. RL-222
- Radiance Bulletin Number 5, Recent Dielectric Constant and Loss Tangent Measurements*, July 14, 1944. RL-483-5
Radiance Bulletin Number 8, X-Band Sandwiches at Variable Angles of Incidence, Dec. 19, 1944. RL-483-8
Radiance Will Reflections at Variable Angles of Incidence, Jan. 4, 1946. RL-483-20
See Suen, T. J. RL-483-25
- Ewing, D. H. *Present Status of Radiation Laboratory Program*, Dec. 9, 1942 to July 1, 1943. RL-33
General Relations Determining the Range of a Radar System, Nov. 12, 1942. RL-180
- Exter, J., *see* Bright, A. A. RL-8-31
- Eyges, L. J. *Leas Feed for K-Band Pillboxes*, Jan. 23, 1946. RL-869
See Dillon, R. E. RL-961
See Rinser, J. R. RL-973
Omnidirectional Antennas for BUPX, Jan. 17, 1946. RL-996
- Fagen, M. D., *see* Pietz, E. RL-390
et al. Moisture-Proofing of Button Micro Capacitors, July 31, 1945. RL-790
- Fairbank, J. D., *see* Baltzer, O. J. RL-536
See Baltzer, O. J. RL-537

CONFIDENTIAL

- Fairbank, J. D. (Continued)
 et al. *A High Resolution K-Band Ship Search Set*, Dec. 7, 1944. RL-576
 et al. *Surface Coverage of Some Shipborne Radar Sets on S, X, and K Bands*, June 15, 1945. RL-729
CXIR Maintenance Manual, Sept. 21, 1945. RL-M-224
- Fairbank, W. M., see Baltzer, O. J. RL-491
 See Baltzer, O. J. RL-536
 See Baltzer, O. J. RL-537
 See Fairbank, J. D. RL-576
 See Fairbank, J. D. RL-720
- Falkoff, D. L. *Performance of Microwave Harmonic Mixer*, Mar. 11, 1946. RL-958
- Fano, R. M. *Double Coaxial Coupler for BUPX Antenna*, May 28, 1945. RL-736
R-F Mechanical Modulator for S-Band, Aug. 30, 1945. RL-798
- Farr, H. K., see Reed, J. RL-255
AN/APS-31/33 R-F Unit, Mar. 14, 1946. RL-886
 See Best. RL-995
A Theory of Resonance in Rotary Joints of the TM₀₁ Type, Jan. 15, 1946. RL-993
- Farrell, T. A., Jr., see Higley, Lt. J. B. RL-M-247
- Feldmeier, J. R., see Hutchinson, F. RL-1007
- Fenn, W. H. *Tests on Undercut Beads in a Concentric Line*, Jan. 30, 1942. RL-152
The Resonant Echo Box, Sept. 4, 1942. RL-277
- Find, E. C., et al. *Parallel Plate Bonds*, Aug. 28, 1945. RL-769
- Fine, E., see Austin, P. RL-S-58
- Fineman, A., see Buck, J. G. RL-609
 See Buck, J. G. RL-683
 See Eisenstein, A. S. RL-933
- Fink, D. G. *Microwave Radar, Volume I, Theory and Practice of Pulsed Circuits*, July 1942. RL-T-8
- Fishback, W. T. *Simplified Methods of Field Intensity Calculations in the Interference Region*, Dec. 8, 1943. RL-461
 et al. *Preliminary Measurements of 10-Cm Reflection Coefficients of Land and Sea at Small Grazing Angles*, Dec. 11, 1943. RL-478
 et al. *Further Measurements of 3- and 10-Cm Reflection Coefficients of Sea Water at Small Grazing Angles*, May 17, 1944. RL-568
 et al. *Graphs for Computing the Diffraction Field with Standard and Superstandard Refraction*, Aug. 13, 1945. RL-799
- Fleisher, H., et al. *The Use of a Twin-T Network in a Selective Frequency Amplifier, with Special Applications*, May 19, 1945. RL-737
- Fletcher, R. C., et al. *Mode Selection in Magnetrons*, Sept. 28, 1945. RL-809
 See Evans, J. E. RL-1951
- Flock, W. L. *A Precision Plan Position Indicator*, June 16, 1944. RL-560
 et al. *A Precision Self-Synchronous Range System for PSI*, May 26, 1944. RL-573
- Fluharty, R. G. *Interference Measurements on the AN/APS-30 Series*, Feb. 29, 1946. RL-998
- Fong, A. *Development of Microwave Test Sets*, Apr. 18, 1949. RL-1911
Black Maria Check Set, TS-495/APX, Nov. 18, 1945. RL-M-233
- Forbes, G. D., et al. *Multiple Reflection Delay Tank*, Aug. 11, 1945. RL-791
- Forsberg, P. W., Jr., see Vitter, A. L., Jr. RL-1905
- Foster, C. E., et al. *Results of Tests Performed on Synchro Units and Systems*, Apr. 8, 1946. RL-921
Description and Method of Operation of the Special Synchro Test Bench and Synchro Testing Procedures, Mar. 25, 1946. RL-922
- Foster, J. S. *Rear Rectangular Guide Antenna Feed*, Mar. 24, 1943. RL-169
Illumination and Phases of Antenna Feeds, Mar. 29, 1943. RL-179
Round Guide Rear Antenna Feeds, Apr. 28, 1943. RL-171 (41-12)
 See Roberts, S. RL-26 (D-3)
Linear Electrical Scanner, Jan. 6, 1945. RL-635
- Fowler, G. A. *Operational Report on B-24, No. 1, in the British Isles, March to June, 1942*. RL-391
- Fox, M., et al. *Manufacturing Procedure for the Radiation Laboratory High Burn-out Crystals*, Dec. 21, 1943. RL-501
- Frank, N. H. *Report on Junction Effects in Wave Guides*, Nov. 1, 1941. RL-124
Propagation in Wave Guides Partly Filled with Dielectric, Apr. 27, 1942. RL-174
Reflections from Sections of Tapered Transmission Lines and Wave Guides, Jan. 6, 1943. RL-189
Coupling between Inductive Windows in Wave Guides, Feb. 27, 1943. RL-197
Transmission Lines and Wave Guides, Similarities and Differences, June 4, 1942. RL-T-5
Wave Guide Handbook, Feb. 9, 1943. RL-T-9
 See Chu, L. J. RL-180
 et al. *T-Junctions in Rectangular Wave Guides, Part I, Theory*. RL-179
- Frankel, S. *The R-1 and the R-2 Crystal Drivers*, Feb. 4, 1946. RL-645-8
The U-1 and U-2 Pre-amplifier Units, Dec. 14, 1945. RL-645-12
 See Cefola. RL-963
 et al. *Supersonic Components for Use in Radar Trainers*, Mar. 25, 1946. RL-1959
 et al. *A Supersonic Echo-Simulating System for AN/APQ-T1*, Mar. 25, 1946. RL-1955
- Frederick, A. H. *Line-Controlled Blocking Oscillator Marker Generator A.R.O. Calibrator*, Apr. 8, 1943. RL-339
A Condenser Phase Shifter Range Circuit with Sine Wave Tracking Suitable for Microwave Height Finding Stations, June 30, 1943. RL-339
 See Reed, H. J. RL-342
 See Reed, H. J. RL-343
 See Brown, P. F. RL-755
- Freehafer, J. E. *Radar Echoes from Periscopes*, Mar. 1, 1943. RL-172
The Effect of Atmospheric Refraction on Short Radio Waves, Nov. 29, 1943. RL-447

CONFIDENTIAL

- Fundingsland, O. T. *Proposed Method for Measuring Instantaneous Magnetron Input Impedance with the Aid of a Delay Network*, Feb. 22, 1944. RL-515
 et al. *A Diode-Type Pulse Voltmeter*, July 6, 1944. RL-521
Voltage Pulse Rate-of-Rise Measurements, July 10, 1944. RL-523
 et al. *Analysis of Liss Modulator Behavior with a Sparking Magnetron Load*, Aug. 10, 1945. RL-765
 Furry, W. H. *Theory of Characteristic Functions in Problems of Anomalous Propagation*, Feb. 28, 1945. RL-680
 et al. *Methods of Calculating Characteristic Values for Bilinear M Curves*, Feb. 6, 1946. RL-795
 Gadsden, C. P. *Low Noise Replacement Preamplicifier for the SCR-584 (BC-1408)*, Mar. 1, 1946. RL-609
 Gaertner, E. R. *An Airborne S-Band Radar for Rooster Operation*, June 28, 1944. RL-554
 et al. *Comparison of Theoretical and Experimental Requirements for Microwave Beacon Transmitter Power and Receiver Sensitivity*, Oct. 13, 1944. RL-627
 Gaffney, F. J. *Instruction Manual Browning Type A Synchroizer*, Oct. 29, 1941. RL-74
 C. G. Montgomery, P. D. Bales. *Report of Activities of Synchroizer Section*, Nov. 5, 1941. RL-75
Instructions for Type E Self-Synchronous Oscilloscope, Oct. 16, 1941. RL-M-109
Tentative Instruction Manual for MIT Radiation Laboratory Test Set, (Type A), Sept. 24, 1941. RL-M-120
X-Band Sealed Standard Cavities, Feb. 13, 1946. RL-S-70
 Gamertsfelder, G. R. *Pulsed Oscillator and Phase Shifter*, July 22, 1943. RL-340
Errors in the Condenser Type Continuous Phase Shifter, Dec. 6, 1944. RL-633
 Gardner, A. L., see Allred. RL-910
 Gardner, H. A. *TFX-34RL Fixed Frequency Standard*, Apr. 26, 1945. RL-M-207
TFX-35RL Fixed Frequency Standard, Apr. 26, 1945. RL-M-208
TFX-36RL Fixed Frequency Standard, Apr. 26, 1945. RL-M-209
 Gardner, H. S., see Gaertner. RL-627
 Gardner, J. H. *Low-Altitude Navigation Aids Developed in Connection with AN/APS-10*, Oct. 3, 1944. RL-615
Low-Altitude Cavity Antenna for APS-33 Project, Feb. 21, 1946. RL-1073
 Gardner, M.E. *Operational Characteristics of 2C43 Tubes as Pulsed Oscillators in a Re-entrant Cavity*, June 15, 1945. RL-732
 Garfield, H. L. *BUPX (AN/FPN-3, 4, AN/FPN-11) Ultra-Portable X-Band Radar Beacons and Their Tactical Uses*, May 18, 1945. RL-710
 Garman, R. L. *AI-10 Trainer Simulation at IF Level*, Aug. 25, 1942. RL-397
AI-10 Bench Trainer Simulation at Video Level, Aug. 24, 1942. RL-398
Land Mass Simulator, Aug. 26, 1942. RL-399
 See Droz. RL-436
 Garrett, G. A., K. L. Mealey. *Photographic Polarization Tests*, May 7, 1943. RL-382
 Garrison, J. B. *A Qualitative Analysis of Hysteresis in Reflex Oscillators*, Feb. 4, 1946. RL-650
 Germeisen, K. J., see LaRue, J. M. RL-210
 et al. *Three Electrode Triggered Gap*, Nov. 19, 1945. RL-880
 et al. *High Voltage Oxide Coated Vacuum Rectifiers*, Dec. 19, 1945. RL-892
 Getting, I. A. *Special Report on Data Transmission by Means of Selsyns*, Nov. 6, 1941. RL-0
 Ghelardi, R. P. *Results of Field Tests on AN/UTN-1-3 (Experimental Models of RUPS) at Boca Raton, Florida (January-March, 1944)*, Aug. 12, 1944. RL-591
Florida Tests on ROSEBUDS Against SCR-582, SCR-615, MRF, July 27, 1941. RL-596
Front-Line Demarcation and Bombing with the Aid of Light-Weight X-Band Beacons, BUPX, A Log of Tactical Tests, October 1944-February 1945, Apr. 17, 1945. RL-713
 Gilbert, C. M. *Corner Reflector Tests at Langley Field*, Aug. 6, 1943. RL-402
 et al. *A Simple Trainer for GCA Approach Controller*, Jan. 24, 1945. RL-669
S-2, S-2B, S-3, S-4, S-4R Motor Control Units, Feb. 11, 1946. RL-645-10
 et al. *Link Conversion Unit for Ground-Controlled Approach Trainer*, May 7, 1945. RL-716
 et al. *A Tracking Error Recorder for the Ground Controlled Approach Trainer*, Jan. 30, 1946. RL-855
Ground Course Computer for AN/APQ-T1, Jan. 21, 1946. RL-856
Ground Clutter Unit for the Ground Controlled Approach Trainer, Feb. 20, 1946. RL-927
Special GCA Trainer Circuits, Mar. 15, 1946. RL-1057
 Gilbert, E. N., H. J. Riblet. *Shipborne Black Maria Antenna*, Oct. 15, 1945. RL-796
Airborne Black Maria Antenna, Jan. 16, 1946. RL-866
 Gill, J. R., see Hutner, R. A. RL-21
 See Hutner, R. A. RL-22
 See Hutner, R. A. RL-23
 See Dodson. RL-702
 See Furry. RL-795
 Gillette, F. N., see Abbenhouse. RL-M-195A
 Gillette, P. R., see Bostick, W. H. RL-217
 See Bostick, W. H. RL-218
 See Bostick, W. H. RL-219
 See Bostick. RL-463
 See Bostick. RL-470
Colloquium on Pulse Transformer Design, Nov. 3-4, 1943 to Jan. 15, 1944. RL-498
Pulse Transformers Designed at Radiation Laboratory and Produced by General Electric Company and Westinghouse Electric and Manufacturing Company, Jan. 19, 1944. RL-513
 See Bostick. RL-545
 See Bostick. RL-546
 See Blythe. RL-692

CONFIDENTIAL

- Gillette, P. R. (Continued)
Pulse Transformer Committee, Proposed Basic Specifications for Pulse Transformers, Nov. 8, 1944. RL-881
Radiation Laboratory Pulse Transformer Designs, Nov. 1, 1945. RL-882
Pulse-Forming Network Committee, Proposed Basic Specifications for Pulse-Forming Networks, Nov. 2, 1945. RL-883
- Glusoe, G. N. *Pulse Shapes and R-F Spectra for Combinations of Strouberg-Carlson Mark I and Mark II Modulators with 2J22, 2J21, and 725A Magnetrons*, Mar. 17, 1944. RL-518
The Regulation Obtainable in the Operation of a Hard Tube Modulator with Magnetron Load, Feb. 20, 1945. RL-697
- Godt, S., see Plain, G. J. RL-370
- Goldstein, H. *Proposed Sea Echo Measurements with Airborne MTI Plane*, Aug. 14, 1945. Informal RL-42
The Resonant Modes of Magnetron Cavities, Dec. 14, 1943. RL-493
The Theory of Corrugated Transmission Lines and Waveguides, Apr. 3, 1941. RL-494
See Bales. RL-509
The Effect of Clutter Fluctuations on MTI, Dec. 27, 1945. RL-700
- Goodell, W. F., Jr. *General Purpose Indication System*, Jan. 18, 1946. RL-817
AN/APS-30 Series Indication System, Jan. 24, 1946. RL-831
Electronic Cursor for AN/APS-15, Jan. 30, 1945. RL-M-175
- Gordy, W. O., see Baltzer. RL-401
See Drake. RL-703
Proposed Antenna for Panoramic Radar, May 22, 1945. RL-8-55
- Goudsmit, S. A. *Comparison Between Signal and Noise*, Jan. 29, 1943. RL-193
Reflection Coefficients and Impedance Charts, Nov. 9, 1942. RL-T-11
See Carlson, J. F. RL-195
See Weiss, P. R. RL-191
Statistics of Circuit Noise, Jan. 29, 1943. RL-192
Possible Measurement of Radar Echoes by Use of Model Targets, Mar. 4, 1943. RL-196
- Grahame, D. C., see Frankel. RL-1055
- Grass, A. M., A. C. Hughes, Jr., B. Chance. *Photoelectric Automatic Range Tracking Unit*, Jan. 25, 1943. RL-324
- Gray, J. W. *Calibrator for Low Altitude Bombing Equipment*, June 1, 1943. RL-336
et al. Differential to Single Ended Potential Converters, Nov. 12, 1943. RL-457
See Chance, B. RL-S-19
- Greene, B. F. *Identification of GCA Search Targets*, Jan. 10, 1945. RL-679
- Greenwood, I. A., Jr., see Chance. RL-S-19
- Griesheimer, R. N. *General Report on Low-Level Power Measurement at 10 Cm in Cox*, Mar. 16, 1943. RL-279
- Griesheimer, R. N. (Continued)
Bridge Methods in Low and Medium Level R-F Power Measurement, Sept. 14, 1943. RL-410
Griffiths, R. W. Laboratory and Field Tests with Stabilized Spinners, Aug. 24, 1942. RL-395
- Griggs, D., see Chance, B. RL-7
- Grissler, H. W., see Gaerttner. RL-627
- Guarnera, J. J., see Dickinson. RL-M-170
See Dickinson. RL-M-184
- Gustafson, W. R., see Carlson. RL-M-226
- Guthrie, G. B., see Chaloff. RL-1062
- Hagler, D. L. *10 Cm ASV Equipment on LB 30 Airplanes*, June 2, 1942. RL-63
et al. Replacement Pressurized R-F Unit for AN/APS-15A, Apr. 10, 1946. RL-M-210
- Hales, E. B. *Errors in Circular Sweeps Due to De-centering and Ellipticity of the Circle*, Feb. 13, 1943. RL-328
- Hall, H. J. *Instruction Manual for Raytheon Service Modulator*, Dec. 18, 1941. RL-78
Report on Western Electric 717A Modulator Type D-150442 and Radio-Frequency Unit Type D-150452, Feb. 28, 1944. RL-425
Model 7—Experimental Hydrogen Thyatron Modulator, Feb. 25, 1944. RL-485
Instruction Manual for Model 7A Hydrogen Thyatron Modulator, Feb. 1, 1944. RL-M-145
- Hall, J. S. *SM Radar*, Nov. 15, 1943. RL-506
- Hall, M. B., M. Harwood. *The Application of Powdered Iron Materials as Permeable Dielectrics at Microwave Frequencies*, Mar. 20, 1946. RL-906
- Hall, W. M. *Brief Report of Activities from February 12 to March 4, 1941*, Mar. 4, 1941. RL-132
- Halliday, D., et al. *The AN/APS-30 Series*, Aug. 15, 1945. RL-763-0
- Halpern, O. *Theory of a "Black Body" Produced by a Combination of a Thin Screen and a Perfect Mirror*, Dec. 12, 1941. RL-148
Theory of a "Black Body" etc., supplement to Report RL-148, Feb. 6, 1942. RL-154
A Method to Measure High Frequency Permeability of a Ferromagnetic Body, Feb. 6, 1942. RL-155
On Surfaces that Reflect Radio Waves Poorly, Nov. 4, 1942. Informal RL-72
- Halmon, Paul R. *Errors of Optical Range Determination*, July 30, 1945. Informal RL-91.5
- Hamilton, D. R. *Static Frequency-Modulation Characteristics of the Reflex Klystron*, Aug. 1, 1945. RL-781
- Hammack, C. M. *A Cathode Follower Employing Two Tubes to Obtain Extremely Low Output Resistance*, Nov. 10, 1943. RL-469
- Hansen, W. W. *Coincidence Method of Noise Reduction*, Aug. 25, 1941. RL-119
Notes on Microwaves, S. Seely, E. C. Pollard, Oct. 20, 1941. RL-T-2
- Harrison, R. J. *Design Considerations for Directional Couplers*, Dec. 31, 1945. RL-724
See Chaloff. RL-1002

CONFIDENTIAL

- Harrold, W. T., see Fairbaak, J. D. RL-576
et al. A Range Only Set for Close-In Seeing, July 18, 1944. RI-598
- Hartman, L. A. *Effect of Pulse Length on System Performance and Operation*, May 30, 1944. RL-571
- Harvey, G. G. *Information on Corrugated Coaxial Lines and Wave Guides*, Dec. 11, 1942. RL-264
Report of Conference on Rapid Scanning, June 15, 1943. RL-275
et al. Report on the Microwave Antenna Conference July 19-24, 1943, Aug. 12, 1943. RL-414
 See Buckwalter. RL-415
 See Buckwalter. RL-581
- Harwood, M., see Hall. RL-906
- Haupt, C. R., see Gilbert. RL-669
- The Trainer for Radio Set AN/MPN-1*, May 25, 1945. RL-676
 See Gilbert. RL-716
 See Gilbert. RL-855
- Havens, B. L., D. R. Corson. *Correlation of ASP Equipment with the Bombight*, July 24, 1942. RL-35
- Raworth, L. J. *AFA Indicators*, Nov. 16, 1942. RL-311
A Comparison of Positive and Negative Intensity Modulation of PPI Displays, Jan. 26, 1944. RL-S-4
- Hayes, A. K., Jr. *Transmission Line Construction Details*, May 14, 1942. RL-231
- Hayes, W. D. *Gratings and Screens as Microwave Reflectors*, Apr. 1, 1943. RL-268
- Razen, R. H., see Dickinson. RL-M-213
- Heales, M. *Effects of Variation of Vane Width and Cathode Size on the Operation of Magnetrons*, Aug. 1, 1944. RL-586
- Hegarty, M., see Dowker. RL-483-17
- Heins, A. K. *Susceptance of Asymetrically Located Windows in Rectangular Wave Guides*, Oct. 16, 1942. RL-183
- Heller, C. A. *An Automatic Frequency Control and Frequency Selection System for Magnetrons*, Apr. 27, 1944. RL-541
- Henry, W. R., see Browne. RL-755
- Hepperle, C. M. *Operating Characteristics of the 419 Klystron*, Apr. 23, 1943. RL-251
- Herk, R. G. *Regulator Report on Spinnings and Radiators*, Oct. 15, 1941. RL-56
Regulator Report on the PRM-1, Oct. 29, 1941. RL-64
- Hertli, M. A. *Cold Resonance Theory of the Waveguide Tunable Magnetron*, Oct. 15, 1943. RL-445
 See Smith. RL-879
Wide Range Tunable Stabilizer, Feb. 21, 1946. RL-964
 See Hutchinson. RL-1007
- Herreman, H. M., see Jelatis. RL-S-77
- Hewitt, G. E. *Preliminary Testing of the Houston Corporation AN/APS-10 Scanner*, Dec. 23, 1944. RL-S-33
Mechanical and Electrical Tests of the General Electric Company Scanner for the AN/APS-10 System, July 14, 1945. RL-S-61
- Hexum, J. *Video Mapping*, Jan. 29, 1946. RL-890
- Hiatt, R., see Green, S., June 21, 1943. RL-271
 See Krutter, H. RL-261
Field Station for Antenna Measurements, Feb. 26, 1945. RL-632
- Hibbert, J. J., see Lyman, E. M. RL-375
et al. Radio Set RHB, Section IV—RHB Test Equipment, Jan. 27, 1944. RL-508-3
- Higenbotham, W. A. *Indicator Fixed Components as Used in a Complete Aircraft Interception Installation*, Apr. 20, 1942. RL-138
- Higley, Lt. J. R., see Cannelly. RL-645-9
The S-5 and S-5B Motor Control Units, Feb. 25, 1946. RL-645-11
et al. Nanmeagle, Nov. 30, 1945. RL-M-217
- Hildebrand, F. B. *The Alteration in the Rotated Field of a Paraboloid Due to a Shift in the Position of the Dipole Feed*, Feb. 26, 1946. RL-1078
 See Crout. RL-S-21
Steady-State Vibration of Two-Spring Mechanical System, Apr. 14, 1945. RL-S-19
- Hill, A. G., see Rierdan, R. C. RL-M-108
- Hilger, R. E. *Final Report on SRBs*, Sept. 3, 1943. RL-403
The AN/APS-31 System, Apr. 1, 1946. RL-763-1
The AN/APS-34, Apr. 10, 1946. RL-763-4
- Hinkle, P., see Kelaer, R. RL-338
- Hite, G., E. Whithum, B. Chance. *Frequency Division with Blocking Oscillator Pulse Transformers*, Mar. 11, 1943. RL-329
et al. A Condenser Phase Shifter Range Unit with Sine Wave Tracking for AN/TPG-1, AN/FPG-1, SCR-588, Mar. 3, 1944. RL-516
 See Flock. RL-573
Medium Precision Range System for CXGQ (Project Henry), Sept. 9, 1944. RL-579
- Hodder, W. K. *A Hard Tube Servoamplifier for Fractional Horsepower DC Motors*, Mar. 14, 1944. RL-535
 W. Roth, *X-1 Error Integrator*, Nov. 27, 1945. RL-645-13
The Mark 1H Supersonic Trainer, Feb. 28, 1946. RL-962
- Hodges, H. T. *Falcon System Manual*, Jan. 15, 1944. RL-M-152A
AN/APG-13 Falcon System Manual, Mar. 31, 1944. RL-M-152B
et al. AN/APG-13 System Manual, Aug. 8, 1944. RL-M-152C
- Hoffmann, A. D. *Mechanical Computer Mechanism for Moving COHO*, Dec. 14, 1945. RL-900
- Holdam, J. V., Jr. *Handbook of Maintenance Instructions for the AN/APG-8 Airborne Radar Gunsighting Equipment*, May 18, 1945. RL-M-214
Preliminary Instruction Manual for AN/APG-15B, June 1, 1945. RL-M-215
- Hollingsworth, L. M., *et al. An X-Band Frequency Modulated Relay System for Video Frequencies*, Jan. 3, 1946. RL-977
 R. Dickinson, *An Automatic Frequency Control System for Magnetrons with Bracon Applications*, Mar. 9, 1946. RL-1020

CONFIDENTIAL

- Holmes, E. A. *Stabilized High Voltage Supply*, May 19, 1944. RL-565
- Holt, F. S., see O'Neal, R. D. RL-203
- Hope, W. D. *A Broad-Band Balanced Mixer for S-Band*, Jan. 23, 1946. RL-916
- et al. *Testing of Skutrons (Supplement)*, May 6, 1944. RL-S-1s
- Hopkins, C. *Truck-Mounted SCR-582 Mk III, a General-Purpose Microwave Set*, Oct. 27, 1943. RL-474
- Horgan, J. D., et al. *Preliminary Operation and Maintenance Handbook for Release Point Indicator AN/ARA-17*, Nov. 1, 1945. RL-1-241
- et al. *Release Point Indicator Used in Conjunction with RC-294*, May 16, 1945. RL-S-47
- See Breen, J. W. RL-S-62
- Howard, B. E., see Hutner, R. A. RL-21
- See Hutner, R. A. RL-22
- See Hutner, R. A. RL-702
- See Dodson, H. W. RL-702
- See Furry, W. H. RL-795
- Propagation in an Atmosphere Containing a Discontinuity in the Index of Refraction*, Mar. 25, 1946. RL-949
- Hower, P. A. *Standards for Microwave Frequencies*, Aug. 17, 1944. RL-599
- Hulbush, M. M., see Foster, C. E. RL-921
- Hudson, F. C., et al. *Semi-Automatic Tactical Plotting Board*, Nov. 23, 1943. RL-467
- Hudspeth, E. S. *Regular Report on the Navy Dirigible K-3*. RL-55
- See Raltzer. RL-401
- et al. *The Depolarization of Microwaves*, Nov. 1, 1943. RL-458
- et al. *Observations of Life Rafts Equipped with Corner Reflectors*, Feb. 15, 1944. RL-533
- et al. *Corner Reflectors for Life Rafts*, Aug. 1, 1944. RL-608
- See Andrew. RL-766
- Hughes, A. C., Jr., see A. M. Grass. RL-324
- Hughes, V. W., see Kelner, R. RL-338
- P. F. Brown, *Externally Triggered Circular Sweep Amplifiers*, May 6, 1943. RL-335
- A Range-Measuring System Using an RC Linear Sweep*, Sept. 18, 1944. RL-549
- A Theory of a Supersonic Delay Line*, Sept. 15, 1945. RL-733
- Hull, R. *Interference Blunder*, June 20, 1945. RL-749
- Testing of Skutrons*, Dec. 30, 1943. RL-S-1
- See Hope. RL-S-1s
- Hulsizer, R. I. *GPI for Close-Control Bombing*, July 27, 1945. RL-783
- Hunt, S. P. *Temperature Rise in ATR Racks*, Oct. 16, 1942. RL-281
- Huntington, A. B., see Benfield. RL-792
- Huntington, H. B., S. Roberts, H. C. Torrey, C. A. Whitmer. *Testing of 1N21 Navy Crystal Rectifiers*, July 12, 1943. RL-256
- Crystal Life Tests under Flat Pulses*, Apr. 7, 1944. RL-543
- Notes on the Contamination of Mercury by Stainless Steel, Mar. 1, 1946. RL-935
- Huntington, H. B. (Continued)
- 1N21 Loss Tester, Type 7556*, Aug. 21, 1944. RL-M-177
- 1N21 Noise Tester, Type 11044*, Jan. 9, 1945. RL-M-191
- Hurewicz, W., et al. *Servos with Torque Saturation, Part I*, May 1, 1944. RL-555
- Servos with Torque Saturation, Part II*, Sept. 28, 1944. RL-592
- Errors in Target Velocity Due to the Rolling and Pitching of the Ship*, Aug. 28, 1944. RL-612
- On Servos with Pulsed Error Data*, Apr. 26, 1945. RL-721
- Hutchinson, F., et al. *Final Report on the BM50 Magnetron*, Mar. 29, 1946. RL-1007
- Hutner, R. A. *Change of Polarization as Means of Gap Filling*, Jan. 28, 1943. RL-19
- See Stratton, J. A., Nov. 3, 1942. RL-18
- H. Dodson, J. Gill, F. Parker, B. Howard. *Field Intensity Formulas*, Sept. 28, 1943. RL-23
- H. Dodson, J. Gill, B. Howard, F. Parker, J. A. Stratton. *Radar Height Finding*, Apr. 6, 1943. RL-29
- E. Lyman. *Properties of the Diffracted Wave Field Intrusivity*, Feb. 12, 1943. RL-29
- F. Parker, B. Howard, H. Dodson, J. Gill. *Transmission at Low Altitudes over Sea Water*, Sept. 1, 1943. RL-22
- Hursh, J. B. *Flight Tests of AEW Block III Relay Link*, June 21, 1945. RL-739
- Ingalls, C. E. *Conference on Standardization of Intermediate Frequency*, Apr. 18, 1942. RL-283
- Revision of General Radio Type 605-B Signal Generator for Pulsing*, June 13, 1944. RL-575
- Jacobsen, A. B., see Ahern, C. R. RL-334
- F. B. Coffin, W. B. Jones, Jr., B. Chance. *Automatic Range and Azimuth Tracking while Scanning*, Aug. 20, 1943. RL-341
- Jacobson, E. A. S. *Instructions for TGS-2SE, TGS-5BL and TGS-5BL Signal Generators*, Nov. 11, 1945. RL-M-141
- et al. *Instructions for TGX-3BL and TGX-5BL Signal Generator*, Dec. 21, 1944. RL-M-143A
- et al. *Instructions for Types TWS-5 and TWS-5EV Battery-Operated Wattmeters (Preliminary Models of TS-125/AP)*, Aug. 4, 1944. RL-M-174
- et al. *Instructions for Type TBN-3EV Thermistor Bridge*, Jan. 15, 1945. RL-M-186A
- Instructions for TGS-6DE Borrowing Signal Generator (Preliminary Model of Test Set TS-348/AP)*, Feb. 19, 1945. RL-M-198A
- Instructions for TVN-6SE Thermistor Bridge*, November 1945. RL-M-203
- Catalog of Microwave Test Equipment*, Aug. 25, 1945. RL-S-41
- Jacobson, R. I. *Lighthouse Tube Superregenerative Receivers*, Nov. 17, 1943. RL-484
- A Measurement of Supersonic Velocity in Mercury at 15 Mc/s as a Function of Temperature*, Sept. 29, 1945. RL-745

CONFIDENTIAL

- Jaffe, D. L. *Development of Antenna for Raytheon SO-CRHY*, Feb. 25, 1943. RL-396
Remote Position Control by Direct Frequency Variation, Nov. 23, 1943. RL-482
 James, H. M. *Report on Night Fighter Pursuits*, June 13, 1941. RL-117
Ideal Frequency Response of a Receiver for Square Pulses, Nov. 1, 1941. RL-125
Correction of the Scanning of Shipborne Radar Systems for Roll and Pitch of the Ship, Dec. 22, 1941. RL-126
New Approach Procedure for Night Fighting, June 26, 1942. RL-178
New Method of Nightfighting (Abridged edition of RL-178), June 30, 1942. RL-178a
Statistical Treatment of Certain Phases of Aerial Combat, July 30, 1942. RL-181
Effect of Routine Evasive Action on the Calculated Approach Procedure, Dec. 16, 1942. RL-187
Use of the Range Clock in Night Fighting with AI Equipment, Apr. 28, 1943. RL-204
Tactical Use of Delayed PPI Scopes of the AEW System, Jan. 11, 1943. RL-8-36
 Jarmotz, P. *SN-41/APA-53 (Cadillac II Synchronizer) and IN-188/APA-53 (Cadillac II Indicator)*, Apr. 18, 1946. RL-937
AN/APS-15 Receiver-Indicator Modified for Ground Range Smeeps and Remote Amplifier, Oct. 10, 1944. RL-M-172A
Operating and Maintenance Instructions for Indicator for Rapid Scan System, Apr. 5, 1946. RL-M-249
 Jelatis, J. G., et al. *AFC Operation and Maintenance*, Jan. 25, 1946. RL-8-77
 Jerrens, A. S. *Modulator Colloquium*, April 16-17, 1943. RL-208
 A. E. Whitford. *Modulated Pulse Communication*, Apr. 13, 1943. RL-216
 See Fandingsland, O. T. RL-521
 See Ames, L. A. RL-M-155A
Instructions for Modifying the SCR-584 Modulator for Use in Aspen Transmitters, Feb. 21, 1944. RL-M-155R
 et al. *Modulator Text*, Dec. 17, 1943; Second Edition, June 23, 1944. RL-T-15
 Johnson, H. L. *A Wide-Excursion Frequency-Modulated Alignment Oscillator or Hobbulator*, May 31, 1945. RL-738
 Johnson, M. H. *Microwave Wattmeter*, Nov. 18, 1942. RL-239
 See Chance, B. RL-320
 J. B. Wiener. *Microwave Wattmeter II, 3-Cm and 1-Cm*, Jan. 21, 1943. RL-246
 Johnson, S. F., et al. *Echo Box Techniques for Testing S-Band Shipborne Radars*, Nov. 24, 1943. RL-M-146
 Johnston, L. H. *GCA Ground Controlled Approach*, Oct. 1, 1943. RL-438
 Jones, E. M. *The J-2 Modulator Unit*, July 19, 1945. RL-645-B
 See Cefola. RL-963
The Cadillac Trainer, Apr. 10, 1946. RL-1072
 Jones, L. G. *APS-33 Antenna, Final Pre-Production Data*, Jan. 11, 1946. RL-861
 Jones, W. B., Jr., see Jacobsen, A. B. RL-341
 Jordan, W. H. *Action of Linear Detector on Signals in the Presence of Noise*, July 6, 1943. RL-305
 Josephson, V., see Linford, L. B. RL-353
 See Linford, L. B. RL-354
 See Williams, D. RL-356
Short Pulse Techniques for High Definition Radar Systems, Mar. 13, 1946. RL-912
 et al. *Anti-Clutter Circuits for AEW*, Aug. 1, 1945. RL-8-52
 Kales, M. L. *SCI Search Antenna Mark I*, Mar. 13, 1946. RL-1025
SCI Search Antenna Mark II, Feb. 20, 1946. RL-1026
 Kallman, H. E. *Thyrite Bridge Controlled Voltage Regulator*, Mar. 9, 1944. RL-525
High Impedance Cable, Mar. 13, 1944. RL-529
Equalized Delay Lines, June 3, 1944. RL-550
Multimeter, Apr. 9, 1945. RL-705
Nonlinear Networks as Voltage Regulators, May 21, 1945. RL-711
 Katz, I. *Instruments and Methods for Measuring Temperature and Humidity in the Lower Atmosphere*, Apr. 12, 1944. RL-487
 See Austin. RL-488
 et al. *Microwave Transmission over Water and Land under Various Meteorological Conditions*, July 13, 1944. RL-547
 Katz, S. *Microwave Test Signals*, Jan. 15, 1946. RL-1023
 et al. *Instructions for Type TSK-1SE Spectrum Analyzer*, July 3, 1945. RL-M-142
Instructions for Type TTX-6RH and Type TTX-10RH Test Sets, June 8, 1944. RL-M-169
Instructions for Types TTX-6(), TTX-9(), TTX-10(), TTX-12() and TS-263/TTS-10 Test Sets, Sept. 13, 1944. RL-M-169B
Instructions for TSX-2 Spectrum Analyzer, Aug. 5, 1944. RL-M-173
Instructions for TSX-2 and Specifications on TSX-4SE Spectrum Analyzers, Oct. 5, 1944. RL-M-173B
Instructions for TSX-2 and Specifications on TSX-4SE and TTS-4SE Spectrum Analyzers, Nov. 4, 1944. RL-M-173C
Instructions for Types TFK-2HU, TFK-3HU, and TFK-6HU Frequency Motors, Aug. 17, 1944. RL-M-170A
Instructions for Types TFK-2HU, TFK-3HU, and TFK-6HU Frequency Motors, Apr. 12, 1945. RL-M-176R
 et al. *Handbook of Operating and Maintenance Instructions for Test Set TS-259(XR-1)/AP with Supplements on Test Sets TS-259(XR-2)/AP and TS-259(XR-3)/AP and Signal Generator TS-259/AP*, Feb. 17, 1945. RL-M-193A
 Ké, T. S., et al. *A Low Power X-Band R-F Gas Switch*, Oct. 17, 1945. RL-841

CONFIDENTIAL

- K6, T. S. (Continued)
Note on a Low Power S-Band Gas Switch, Dec. 10, 1945. RL-979
- Keary, T. J. *A Study of Fanned Beam Radiators*, Feb. 20, 1942. RL-99
- R. E. Alley, Jr. *An Automatic Recorder for Microwave Antenna Pattern Measurements*, Mar. 1, 1943. RL-266
 See Bohnert. RL-659
 See Bohnert. RL-660
Calculation of Vertical Polar Diagrams and Power Gains of Antennas for Airborne Navigational Radars, Sept. 10, 1945. RL-750
 See Bohnert. RL-779
et al. AN/APS-32 and AN/APS-34 Airborne Navigational Radar Antennas at K-Band, Mar. 15, 1946. RL-808
- Kellner, R. L. *Preliminary Book of Maintenance Instructions for Shipboard Components of AEW*, July 21, 1945. RL-M-229
 See Slaunwhite. RL-M-243
 See Slaunwhite. RL-M-244
HMM for Cadillac II Power Supply, Oct. 23, 1945. RL-M-245
- Kelly, H. C., see Hull. RL-S-1
 See Hope. RL-S-1a
- Kalner, R., V. W. Hughes, A. Berg, P. Hinkle, B. Chance. *An Adaptation of the Phantastron Delay Multivibrator Circuit to the 6SA 7 Tube*, Aug. 21, 1943. RL-338
- Kenngott, R. L., et al. *Tests on the Performance of the Mk 1 Mod 7 Computer*, Apr. 24, 1945. RL-677
- Kerr, D. E., et al. *An Introduction to Microwave Propagation*, Sept. 16, 1943. RL-406
- Kessler, M., see Hudspeth, E. S. RL-458
 See Drake, D. T. RL-703
- Kirby-Smith, J. S. *S Band ASV Marker*, Mar. 27, 1942. RL-298
Measurement of Electrical Tuning Ranges of 707 Tubes, Aug. 17, 1943. RL-421
Notes on the Power Output of 723A Tubes, Feb. 19, 1944. RL-8-7
- Kirkpatrick, H. A., see Blackburn, J. F. RL-797
- Knight, G. *Measurements and Waveforms Obtained with SCR-598 Modulator*, Nov. 29, 1945. RL-757
- Knight, H. M. *Preliminary Installation and Operating Instructions for Radar Set AN/CPS-6*, Feb. 3, 1945. RL-M-196
- Knipp, J. K. *Space Charge Between Parallel Plane Grids*, Mar. 22, 1944. RL-534
Notes on the Reflex Oscillator, May 3, 1945. RL-709
The Temperature-Limited Diode, Jan. 31, 1946. RL-761
Theory of Noise from the Reflex Oscillator, Jan. 10, 1946. RL-873
- Koehler, J. F. *Regular Report on the X-JO-3*, Oct. 1, 1941. RL-53
Regular Report on the X-JO-3, Nov. 5, 1941. RL-54
Regular Report on the CXBII-1, The PBM-1, Dec. 3, 1941. RL-65
- Koehler, J. F. (Continued)
 C. J. Taylor, *Survey of 10-Cm Radar Installation in PBM-1 Flying Boat*, May 1, 1942. RL-383
- Kravitz, E. R., see Jarrema. RL-T-15
- Krock, R., et al. *The Two-Disc D-C Thermistor Bridge Circuit*, Jan. 12, 1944. RL-502
- Krullkonki, S. J. *A Survey of High-Vacuum Diodes Used for Surge-Limiting Operation in Modulators*, Sept. 5, 1944. RL-580
Summary of Life-Test Data on Sylvania 4C35 Hydrogen Thyratrons, Feb. 1, 1945. RL-589
Trigger Requirements of the 4C35 and 3C45 Hydrogen Thyratrons, Aug. 31, 1944. RL-605
Technical Data and Operating Notes for the 3C24 Hydrogen Thyatron, Nov. 14, 1945. RL-828
Summary of the Life Test Program on 3C35, 4C35, and 5C22 Hydrogen Thyratrons, Jan. 31, 1946. RL-365
Hydrogen Thyratrons in Pulse Generator Circuits, Mar. 18, 1946. RL-953
- Krutter, H. *A Simple Method for Determination of the Law of a Crystal*, Apr. 29, 1943. RL-270
Explanation of Impedance Matching, July 7, 1942. RL-T-6
- R. Hiatt, J. Bohnert. *Some Matching Properties of Antenna Feeds*, Nov. 17, 1942. RL-261
 See Bohnert. RL-665
- Kuper, J. H. H. *Preliminary Report on a 10-Cm Super-Regenerative Receiver*, May 1, 1942. RL-284
- P. A. Cole, F. Bailey. *Report on Tests of RCA and GE Lighthouse Tubes*, Jan. 11, 1943. RL-290
et al. Simplified Measurement of Receiver Sensitivities (S-Band Noise Source), Sept. 17, 1943. RL-443
- See Cole. RL-542
 See Cole. RL-693
et al. Notes on Load Effects in Reflex Oscillators, May 29, 1945. RL-717
 See Beers. RL-774
et al. Measurements on Noise from Reflex Oscillators, Dec. 21, 1945. RL-872
- Kyhl, R. L. *The Use of the Magic Tee Microwave Bridge in Measuring Impedance*, Dec. 12, 1944. RL-643
 See Dicke. RL-1002
- Larson, R. W., H. F. Balmer, A. S. Meier. *Tests on Radar Echoes from Cylinders*, July 10, 1942. RL-378
- LaRue, J. M., J. R. Perkins, K. J. Germeshausen. *Tests on Five Types of Triggered Switch Modulators*, June 1, 1942. RL-210
- Lashof, T. W. *Antenna Parts and Measuring Equipment*, Nov. 5, 1943. RL-472
Information on Radiation Laboratory Paraboloid Reflectors, Jan. 23, 1945. RL-679
- Laalett, L. J., see C. F. West. RL-377
- Calculation of Errors in Conical Scanning GL Systems Arising from Detuning When the Transmitter Frequency Is Pulled During the Rotation*, March 1943. Informal RL-94
et al. Tests of AGL-1 Installed in Tail of B-24D Airplane, Mar. 5, 1943. Informal RL-94

CONFIDENTIAL

- Lawrance, R. H., et al. *Impedance Characteristics and Equivalent Circuits for Vertical Radiators*, Apr. 15, 1944. RL-512
- Lawrence, J. A. *APG-1 Tracking and Firing Tests*, Jan. 15, 1945. Div. 14-244.1-M2
- Lawrence, T. E. *AN/APG-13B Vulture Rocket Computer*, Jan. 23, 1946. RL-909
- General Description, Special Installation Requirements, and Mounting Dimensions of AN/APG-5 Airborne Range Only [ARO] Equipment, Jan. 31, 1944. RL-S-6
- Lawry, C. C., Jr. *Analysis of an Amplidyne Servo-Mechanism*, Feb. 10, 1942. RL-T-4
- Lawson, A. W., Jr., see Hollingsworth, L. M. RL-977
- Lawson, J. L. *Design and Test of Concentric Transmission Lines*, July 15, 1941. RL-141
- Standing Wave Detector, May 5, 1942. RL-341
- Elimination of the "Tronkosc" Between Transmitter and Junction in a Duplexing System, May 4, 1942. RL-345
- Measurement of Impedance with the Standing Wave Detector, May 18, 1942. RL-346
- The T-R Box, May 13, 1943. RL-347
- Photography of Successive Pulse Reflections from a Moving Target, June 12, 1942. RL-318
- Measurement of the Q-Value of a T-R Box, July 13, 1942. RL-349
- See R. L. McCreary. RL-352
- See Stone, A. M. RL-364
- Stone, A. M. *The Double-Tuned Circuit with Transitional Coupling*, Oct. 8, 1945. RL-784
- Pulsed-Interference Suppression, Oct. 15, 1945. RL-826
- See Ashby. RL-914
- Detection of Propeller and Sambo Modulations, May 16, 1944. RL-S-10
- See Josephson. RL-S-52
- Leachman, R. B., et al. *N^o Gate Attachment for SCR-584*, May 3, 1944. RL-566
- Lee, R. W. *Range Height Indicator*, Aug. 25, 1943. RL-418
- Lees, W., et al. *Notes on the European and Eastern Atlantic S. S. Loran Systems*, Apr. 17, 1945. BBRL-83
- Leiter, H. A. *Dielectric Transmission Measurements*, Jan. 15, 1943. RL-244
- et al. *The ID27TR Tube*, Oct. 4, 1944. RL-594
- A Microwave Band-Pass Filter in Waveguide, Nov. 16, 1945. RL-814
- Levine, R., et al. *Chemical Methods for Maintaining the Partial Pressure of Water Vapor in TR Tubes*, July 13, 1944. RL-593
- Lewis, F. D. *Coordination*, Dec. 19, 1940. RL-157
- Report on XP-61 Mock-up, Apr. 23, 1941. RL-2
- Lien, J. *Project TGI (AN/APX-11, AN/APX-16)*, Apr. 18, 1946. RL-1081
- Preliminary Instruction Manual for X-Band Coexistent Beacon XCB (Mark I) AN/APX-15, Mar. 1, 1945. RL-M-199
- Linford, L. B. *Regular Report on the Components Testing System*, Oct. 8, 1941. RL-41
- Regular Report on the Components Testing System, Nov. 12, 1941. RL-42
- Regular Report of the Advanced Development System, Nov. 12, 1941. RL-46
- S. Seely. *Special Report on Buffered Multiple Phase Box*, Oct. 19, 1941. RL-44
- D. Williams, V. Josephson, W. Woodcock. *Definition of Maximum Range on Aircraft and Its Quantitative Determination*, Nov. 12, 1942. RL-353
- D. Williams, V. Josephson, W. Woodcock. *Supplementary Report on Altitude Determination by Means of an Expanded Elevation Indicator, Vertical PPI*, Dec. 2, 1942. RL-354
- D. Williams, V. Josephson, W. Woodcock. *Time Fluctuations of a Rotary Spark Gap Modulator*, Dec. 18, 1942. RL-356
- et al. *Window Tests on AN/CPS-6, Leesburg, Florida, June 7 and 9, 1944, July 8, 1944*. See Josephson. RL-S-20
- See Josephson. RL-S-52
- Lipkin, H. J., et al. *Black Maria, Coincident Cross-Band Transponder for S-Band Radar (AEW)*, Dec. 28, 1944. RL-672
- Lippmann, B. A. *Theory of Directional Couplers*, Dec. 28, 1945. RL-860
- Lipscomb, G. Q. *Waveforms, Voltages and Resistance Measurements in AN/APA-5 Indicator Equipment*, Jan. 31, 1945. RL-S-38
- Logemann, H., Jr., see Hollingsworth, L. M. RL-977
- Lougner, A. *Regular Report on the Operation of the Service Cage*, Oct. 8, 1941. RL-45
- Light Mountain Radar Set, Dec. 10, 1943. RL-491
- V-Beam G.C. Radar, Aug. 6, 1943. RL-507
- et al. *AN/APS-10 a Lightweight X-Band Search Set*, Aug. 20, 1945. RL-768
- AN/APS-10 Airborne Radar, July 12, 1944. RL-S-22
- Longmire, C. L. *Pulse-Length Discrimination in Beacons*, Jan. 27, 1944. RL-510
- Luecke, E. A., see Ramsey, N. F. RL-381
- Lyman, E., see Hutner, R. A. RL-20
- J. J. Hildert. *Radar Target Contrast*, June 2, 1942. RL-375
- Radio Set RHB, Section I, Technical Description of the Production Model Radio Set RHB; Section II, Adjustment and Alignment of Radio Set RHB, Jan. 17, 1944. RL-508-1
- The SCR-584 Plotting Table System, July 3, 1944. RL-595
- The AEW System, Book I, Airborne Equipment, Aug. 15, 1945. RL-806-1
- The AEW System, Book II, Shipboard Equipment, Sept. 24, 1945. RL-806-2
- The AEW System, Book III, Test Equipment, Nov. 5, 1945. RL-806-3
- See Schultz. RL-994
- Lyman, E. R., et al. *Micro-II*, Apr. 16, 1945. RL-714

CONFIDENTIAL

- Macnee, A. B., *see* Beers. RL-528
Grounded Grid I-F Amplifiers, Jan. 18, 1946. RL-207
- MacNichol, E. F., Jr. ARO Range Unit, Apr. 9, 1943. RL-497
RL-332
B. Chance. Medium Precision, Self-Synchronous Automatic Range Tracking Circuit Model 4, June 18, 1942. RL-323
MacRae, D., Jr., *see* Gray. RL-457
Maddaus, I., Jr. IFF Antenna for Mounting on the Wing of a TBM Torpedo Bomber, Dec. 6, 1945. RL-842
IFF Receiving Antenna for Mounting in Cadillac Dish, Nov. 26, 1945. RL-843
IFF Transmitting Antenna for Mounting in Cadillac Dish, Dec. 14, 1945. RL-844
AEW Block III Relay Antenna, Nov. 30, 1945. RL-845
Six-Element Vertically Polarized Beacon Antennas, Dec. 8, 1945. RL-846
- Mallach, L. W. Reduction of Radar-Radio Interference from Modulators, Aug. 3, 1943. RL-431
- Mandeville, C. E., *see* Hudspeth, E. S. RL-458
See Harrold, W. T. RL-598
See Andrew, M. M. RL-766
- Mann, L. G. TFX-29RL Frequency Comparator, Feb. 16, 1945. RL-681
- Mann, M. M. Vixen X, Dec. 15, 1944. RL-607
- Mansur, I., *see* Clarke, H. F. RL-731
Discontinuities in Standing Wave Detectors and Waveguide Function Steps, Dec. 14, 1945. RL-893
See Clarke, H. F. RL-1071
- Marcus, P. M. Theory of Radar Return from the Schnorkel, Jan. 15, 1945. RL-671
The Interaction of Discontinuities on a Transmission Line, Feb. 6, 1946. RL-930
Reflection of Radiation from Curved Surfaces, Jan. 16, 1946. RL-1029
- Marcy, H. O. Trainer for Mark 35 Radar, Apr. 5, 1946. RL-907
et al. Instruction Manual for Projection PPI, Jan. 10, 1944. RL-M-137
- Marcy, H. T., et al. Tests on a M3B1 Oil Gear and an Amplidyne Serve for the SCR-598 Central Problem, Jan. 4, 1944. RL-464
- Margenau, H. Dispersion of High Frequency Radio Waves in Ionized Gases, Oct. 26, 1945. RL-836
Theoretical Interpretation of Recovery Times of TR Hexes, Jan. 9, 1946. RL-929
Theory of Alternating Current Discharges in Gases, Jan. 10, 1946. RL-907
- Marsh, F. D., *see* Eisenstein, A. S. RL-813
- Marshak, R. E. Theory of Circular Bends in Rectangular Wave Guides, June 24, 1943. RL-296
- Martin, E. G., *see* Hudson, F. C. RL-467
Design of a 4-Foot Corner Reflector for K-Band, Aug. 20, 1945. RL-642
- Martin, F., *see* Williams, D. RL-365
See Ashby, R. M. RL-913
See Cafola, M. RL-914
RL-963
- Mason, S. J. 45° Microwave Reflector, Nov. 19, 1943. RL-287
The Range Calculator, Dec. 20, 1943. RL-497
Horn Feeds for Parabolic Antennas, Jan. 22, 1946. RL-663
SG-1 Mark III Antenna, Apr. 5, 1946. RL-1044
- Mathison, W. W., et al. Frequency Drift of Certain X-Band Magnetrons, Jan. 23, 1945. RL-663
See Chaloff, R. S. RL-1062
- Mautner, L. A Shipborne Mechanical Rotation Plan Position Indicator, RL-315
- Mautz, C. W. The Solenoid Camera Drive, Oct. 10, 1945. Informal RL-915
- Maxwell, E. Conductivity Loss Measurements at K-Band, Jan. 15, 1946. RL-864
- Mayall, N. U. Some Photographic Measures of PPI Linearity and Addendum, Dec. 22, 1942. RL-389
The Identification of Signals on PPI Photographs for the Construction of Radar Maps, Oct. 20, 1943. RL-449
- McBean, J. M. Electronic Line Voltage Stabilizers, Feb. 7, 1946. RL-1042
- McClure, G. W. N-1 IFF Unit, Mar. 22, 1946. RL-645-14
Two Proposed Methods of Recording the Position of a Moving Link Crab, June 20, 1945. RL-730
The AN/APN-4 Antenna Simulator, Nov. 15, 1945. RL-839
The OCJ-1 Trainer, Mar. 25, 1946. RL-1058
- McConnell, R. A. The Detection of Moving Targets among Ground Clutter by Coherent Pulse Methods, Dec. 14, 1943. RL-480
See Emalie, A. G. RL-481
See Cunningham, J. M. RL-562
A Precision X Sweep Generator, May 23, 1944. RL-563
The Storage of Video Signals on Simple Mosaics, Feb. 18, 1946. RL-743
An Experimental MTI System, Apr. 18, 1946. RL-744
Some MTI Nomenclature in Use at Radiation Laboratory, May 2, 1945. Informal RL-65
et al. Estimated Limitations of Kit MC-642, MTI for SCR-584, June 18, 1945. Informal RL-65
- McCoy, F. C., et al. Radio Set RHIB, Section III, Glider Checkout Procedure, Jan. 21, 1944. RL-508-2
- McCoy, R. T. Roadhead Microwave Beacon Equipment, Oct. 1, 1943. RL-460
- McCreary, R. L. Direct Coupling in the T-R Box, Nov. 3, 1942. RL-352
See J. L. Lawson, July 13, 1942. RL-349
- McFarlane, M. D., *see* Meagher, R. E. RL-388
- McGrath, S. Instruction Manual for B-18 Radar Installation, Apr. 1, 1942. RL-M-100
Instruction Manual for Raytheon Laboratory Modulators WX 4054, WX 4054 A and WX 4054 B, Apr. 7, 1942. RL-M-193
- McKenzie, A. A. Lightweight Loran Transmitter (LITX), Apr. 3, 1944. RL-M-158A
Harvey 170-T Loran Transmitter Manual, May 10, 1944. RL-M-162

CONFIDENTIAL

- McKenzie, A. A. (Continued)
Handbook of Operating Instructions for Loran Low-Frequency Converter CV-27/UPN, Apr. 27, 1945. RL-M-222
Handbook of Maintenance Instructions for Loran Low-Frequency Converter CV-27/UPN, July 6, 1945. RL-M-225
- McLaughlin, D. B., et al. *Precise Navigation by Means of a Radar Map Superposed on the PPI*, Apr. 7, 1944. RL-503
 et al. *A Microfilm Chart Projector for Radar Navigation*, Jan. 23, 1945. RL-658
 Smith, C. A. *The Radar Chart Projector*, Apr. 18, 1946. RL-926
- McMillan, E. H. *Design Characterization of Spinner Housing Materials*, Jan. 12, 1943. RL-245
Radome Bulletin Number 1, Dec. 2, 1943. RL-183-1
- McMillan, E. M. *B-18-A Report, February 13 to July 22, 1941*. RL-1
- McMillan, F. L., Jr., J. B. Wiesner. *Pre-ignition Transmission through Gas-switching Tubes and its Contribution to Crystal Failures*, July 3, 1943. RL-254
 See Levine. RL-593
 et al. *Recovery Time Measurements in Band Pass TR's for Vorticon Gunset*, Dec. 18, 1945. RL-895
- Meagher, R. E. *Regular Report on Indicators and Synchronizers*, Oct. 15, 1941. RL-47
Regular Report on Indicators and Synchronizers, Nov. 19, 1941. RL-48
 M. D. McFarlane. *General Selwyns*, Oct. 9, 1942. RL-388
 E. C. Pollard. *Indicators and Synchronizers*, Dec. 24, 1941. RL-49
 See Emberson, R. M. RL-876
- Mealey, K. L., see Garrett, G. A. RL-582
- Mehring, F. J., see Carly, W. M. RL-848
- Meler, A. S., see Larson, R. W. RL-378
- Meijer, R. H. *A Trigger Generator for Signal Threshold Studies*, Apr. 2, 1946. RL-1036
- Meservey, E. B. *Unified Radar Bomb Sight, URBBS*, July 31, 1945. Informal RL-71
- Meyer, C. A. *Handbook of Operating and Maintenance Instructions for Test Set TGI-3CA*, Mar. 28, 1945. RL-M-204
Preliminary Instruction Manual for S-Band Coincident Transponder Black Marin RT-74/APX, Sept. 20, 1945. RL-M-211
- Michel, P. C. *Special Report on 30-Mc Pulsed Signal Generator*, Oct. 16, 1941. RL-109
- Miley, H. A., et al. *Magnetron Starting Time*, Mar. 14, 1944. RL-509
 et al. *Stability of Magnetrons Operated by Spark Gap Modulators*, Oct. 9, 1944. RL-626
 et al. *Increasing Stability of Operation of 4J31-35 Magnetrons in the AN/CPS-1 System*, Jan. 25, 1945. RL-621
 et al. *Influence of Pulse Transformer Design on 4J31-35 Magnetron Stability*, Aug. 11, 1945. RL-622
- Miller, C. W. *Amplitude Servo for SCR-598 Surface Fire Control Set*, Oct. 1, 1943. RL-435
 See Marcy, H. O. RL-464
- Miller, E. E. *Comparison of Reflectivities of Approximately Similar Plastic and Metal Airplanes*, May 22, 1942. RL-384
Development of a Flexible Relay Servo Mechanism and Application to Sector Scanning Spinner Controls, May 29, 1942. RL-386
Tactical Devices Based on Superposition of a Plotting Board on the PPI Pattern, Aug. 8, 1942. RL-387
A One-Tube, One-Selwyn Sector-Scanner, Dec. 6, 1943. RL-448
 See McLaughlin, D. B. RL-503
MEW Class Control, Apr. 30, 1946. RL-S-76
- Miller, J. W., see Bender, R. S. RL-729
 See Bent, A. E. RL-780
- Millett, W. E., et al. *Survey of Foster Scanner Developments*, Apr. 25, 1946. RL-1074
- Millman, J. *Thyratron Servo Control Circuit for Spinners*, Apr. 4, 1942. RL-31
 See Linford, I. B. RL-S-20
- Mitchell, R. M., see Katz, I. RL-547
- Montgomery, C. G., et al. *Report of Activities of Synchronizer Section*, Nov. 5, 1941. RL-75
 See Montgomery, D. D. RL-162
 See Montgomery, D. D. RL-163
 See Montgomery, D. D. RL-164
 See Montgomery, D. D. RL-167
 See Millett, W. E. RL-1074
- Montgomery, D. D., C. G. Montgomery. *Polarization Effects in a Circular Wave Guide at 3 Cm*, Sept. 12, 1942. RL-162
 C. G. Montgomery. *3-Cm Magnetron Cold Impedance*, Sept. 16, 1942. RL-163
 C. G. Montgomery. *Losses and Reflections Introduced by Joints and Plungers in 3 Cm Waveguides*, Oct. 15, 1942. RL-164
 C. G. Montgomery. *Measurement with a Frequency-Modulated Oscillator at 3 Cm*, Jan. 18, 1943. RL-167
The Generation of Harmonics by Silicon and Germanium Crystals, Oct. 23, 1945. RL-818
 See Millett, W. E. RL-1074
- Montgomery, R. B., see Burgoyne, R. H. RL-651
- Moore, C. E., see Blae, R. W. RL-636
 See Blae, R. W. RL-640
- Moore, L. F., see Collins, G. B. RL-87
- Moore, T. M. *A Description of AN/TPS-10 and Its Performance in Mountainous Terrain*, Aug. 3, 1944. RL-606
A Survey of the AN/TPS-10 (Little Ahner), Apr. 26, 1946. RL-S-69
- Moore, W. *AEW Bulford Trials*, Oct. 19, 1944. RL-S-32
- More, K. R. *Performance Characterization of the Magnetron under Conditions Simulating Beacon Operation*, Tube Types 2J38 and 2J22, June 30, 1943. RL-227
 See Miley, H. A. RL-509
 See Cole, P. A. RL-642
 See Miley, H. A. RL-621
 See Mathison, W. W. RL-663

CONFIDENTIAL

- More, K. R. (Continued)
Manual for Magnetrons, Types 2J 23-34, 706AY-GY, 714AY and 718AY-KY, Sept. 1, 1943. RL-M-116
- Morse, P. M. *Impedance in Transmission Lines and Waveguides*, Apr. 15, 1941. RL-116
- Mosher, R. K. *A Method for Relay Radar PPI Synchronization*, Apr. 20, 1944. RL-505
- Mulvey, J. X., Jr. *Interconnecting AN/APA-5 and Army Radar Sets*, Oct. 2, 1944. RL-S-30
- Murray, W. K. *AEW, Airborne Early Warning*, Sept. 1, 1944. RL-S-26
- AEW, *Airborne Early Warning (S-26 plus additional material)*, Sept. 1, 1944. RL-S-27
- Myers, S. B. *Parallel Plate Optics for Electrical Scanning*, Dec. 15, 1944. RL-646
- Myers, W. L. *Weight Analysis of Airborne Radar Sets*, Jan. 1, 1945. RL-450
- Nash, J. P., see Hudspeth, E. L. RL-533
- See Hudspeth, E. L. RL-408
- Nathe, R. U., and W. Roth. *Q1-2 and Q3 Servo Amplifiers*, Sept. 25, 1945. RL-645-2
- A Dummy Lag Transmitter for the OBJ Radar Trainer*, Feb. 25, 1946. RL-1059
- Nawrocki, C. *Fine Grid Technique*, Apr. 3, 1943. RL-209
- Neelands, L. J., see Katz, I. RL-547
- Neher, H. V. *The Radiation Laboratory S-Band Amplifier (Preliminary Report)*, July 10, 1943. RL-306
- Low-Voltage K-Band Oscillator*, Sept. 17, 1945. RL-764
- Some Notes on Space-Charge-Limited Oscillators and Amplifiers at Microwave Frequencies*, Nov. 15, 1945. RL-822
- Neher, L. K., see Ashley, R. M. RL-917
- Newell, S. *Instruction Manual for Audio Indicator, Type 123K*, Mar. 26, 1942. RL-M-122
- Nibbe, G. H. *A Method for Automatic Frequency Control of Thermally Tuned Oscillators*, Dec. 20, 1945. RL-959
- Combined Reflector-Cavity Automatic Frequency Control for Thermally Tuned Reflex Oscillator Tubes*, Dec. 11, 1945. RL-1034
- Model 5 Synchroscope*, June 2, 1944. RL-S-18
- Nicholson, D. B., et al. *Mechanical Resonant Scanner*, Mar. 13, 1946. RL-782
- Nichols, N. B., see Hurewicz, W. RL-555
- See Hutchinson, F. RL-1007
- Niemann, F. L. *S-Band Coaxial Line to Rectangular Waveguide Transitions*, Dec. 7, 1945. RL-802
- Nonnemaker, G. M. *MTI for MEW*, May 24, 1945. RL-752
- Noodleman, S. *Production Sources of Self-Synchronous Units*, Dec. 1, 1942. RL-282
- Nottingham, W. B. *Luminescence of RCA Cathode-Ray Tube with Cascade Screen*, Feb. 2, 1942. RL-137
- Report on Measurement of British CR Tubes with Long-Persistence Screens*, Oct. 7, 1942. RL-310
- Conference on P7 Cathode-Ray Tubes held April 5 and 6, 1943*, May 14, 1943. RL-314
- Nottingham, W. B. (Continued)
 et al. *Proposed Performance Specifications for the P7 Long-Persistence Cascade Screen*, Aug. 12, 1942. RL-309
- Studies of British Phosphors of the Type "C," "H," "K," and "M,"* Aug. 2, 1943. RL-405
- Notes on Photometry, Colorimetry, and an Explanation of the Centibel Scale*, Dec. 17, 1945. RL-804
- Memorandum Describing High Gain DC Amplifier*. RL-M-110
- Comparison of P7 Screen Test Methods*, Mar. 14, 1944. RL-S-9
- Nowak, W. B. *Antenna Feeds from $\frac{1}{2}$ " Coaxial Line*, July 5, 1943. RL-274
- O'Day, M. D., see Lipkin, H. J. RL-672
- Olson, V. A. *A Moving COHO Conversion Unit*, Apr. 3, 1946. RL-975
- O'Neal, R. D., et al. *Application of Corner Reflectors to Radar (Theoretical)*, May 14, 1943. RL-203
- Application of Corner Reflectors to Radar (Experimental)*, July 1, 1943. RL-280
- Operation for Peak Performance*, Dec. 20, 1945. RL-S-74
- Orpin, L. H. *Ultra-Portable Microwave Radar Beacons as Beacon Approach Aids in Aircraft Landing*, July 4, 1944. RL-581
- Preliminary Manual for Radar Beacon Type BPS (Prototype of AN/CPN-8, Similar in Function and Corresponds to SCR-620)*, Jan. 3, 1944. RL-M-130
- Ottens, R. C. *AN/APS-15A and AN/APS-15B Tests*, Nov. 27, 1945. RL-S-57
- et al. *Flight Test of an Experimental Horn-Fed Antenna for H2X*, Dec. 1, 1944. Informal RL-913
- Overhage, C. F. J. *Radar Photo Reconnaissance*, Apr. 10, 1944. RL-S-13
- Termination Report on Radar Photo Reconnaissance Project*, Nov. 16, 1944. RL-S-34
- H2K Radar Displays*, Apr. 9, 1945. RL-S-44
- Project Falcon, Air-to-Surface Radar Range for 75-Mm Cannon in B-25*, Dec. 15, 1943. Informal RL-91
- Project Falcon, AN/APG-13*, Jan. 24, 1944. Informal RL-91
- Page, R. G., see Duvall, G. F. RL-S-63
- Paine, G. R. *AN/APS-4 (ASH) Trainer*, Sept. 29, 1944. RL-446
- AN/APG-T1 Training Equipment*, July 28, 1945. RL-759-1
- AN/APG-15 Modification Kit for AN/APG-T1 Training Equipment*, Aug. 30, 1945. RL-759-2
- Painter, N. H., see Krock, R. RL-502
- Matching Resistance Curves by Means of Two Linear Gauged Potentiometers and a Three-Terminal Resistance Network*, Aug. 17, 1944. RL-672
- See Crout, P. D. RL-682
- See Crout, P. D. RL-696
- Calculation of the Resonant Frequencies of a Torus by Lagrangian and Variational Methods*, Nov. 14, 1945. RL-934
- Palmer, C. H., Jr., see Josephson, V. RL-S-52

CONFIDENTIAL

- Pao, C. S., et al. *Paraboloid Antenna Characteristics as a Function of Feed Tilt*, Feb. 16, 1944. RL-479
Electrical Design of the AN/TPS-10 Antenna, Dec. 28, 1944. RL-648
Shaping the Primary Pattern of a Horn Feed, Jan. 22, 1945. RL-655
The Bearertail (AN/CPS-4) Antenna, Apr. 9, 1946. RL-1027
 Parker, F. D., see Hutner, R. A. RL-21
 See Hutner, R. A. RL-22
 See Hutner, R. A. RL-23
 See Furry. RL-795
 Pearsall, C. S. *Corrosion of Copper, Brass, and Aluminum by Gaseous Dielectrics*, Jan. 13, 1943. RL-248 (53-17)
 See Fox, M. RL-501
 See McMillan, F. L. RL-895
 Pearson, M. D., et al. *The SCI Rapid Scan Height-Finding Antenna*, July 9, 1945. RL-688
 Perkins, E. R. *Results of Tests Performed on "Synchro" Units and Systems*, Jan. 14, 1944. RL-490
 Synchro Units and Their Characteristics, June 27, 1945. RL-740
 See Foster, C. E. RL-924
 Perkins, G. D., see Lipkin, H. J. RL-672
 Perkins, J. R., see LaRue, J. M. RL-210
 et al. Report on Type A and Type B Pulse Transmission Cables and Connectors, Sept. 11, 1943. RL-424
 Perry, H. A., Jr. *Electrical Test Methods for Radomes*, Jan. 11, 1946. RL-483-26
 Peterson, J. M. *Microwave Technique as of May 1943*. RL-T-13
 Phillips, R. S. *Conical Scanning*, Aug. 4, 1946. RL-367
 Servomechanisms, May 11, 1943. RL-372
 See Chance, H. June 1, 1942. RL-320
 et al. Modified Housing Course, Nov. 2, 1942. RL-369
 Aided Tracking, Part II, Nov. 3, 1943. RL-453
 et al. Theoretical Calculation on Best Smoothing of Position Data for Gunery Prediction, Feb. 16, 1944. RL-532
 See Dowker, C. H. RL-578
 Noise Filtering Properties of Third Detectors, Oct. 1, 1945. RL-833
 et al. Analysis of the Tracking Errors of the MK56X System, Mar. 1, 1946. RL-884
 Pierce, J. A., et al. *Simple Computation of Distance on the Earth's Surface*, July 8, 1944. RL-582
 The Future of Hyperbolic Navigation, Aug. 18, 1945. RL-625
 Pietz, K., and M. D. Fagen. *Vibration and Shock Comparison Tests of 7" Cathode Ray Tubes in Two Different Type Mounts*. RL-390
 Pike, B. W. *Modification of SCR-584 for Oboc II*, Feb. 15, 1944. RL-M-151
 Pinney, E., see Phillips, R. S. RL-369
 Plain, G. J., et al. *Data on SCR 584 Control Equipment*, Dec. 17, 1942. RL-370
 Servo Generator Life Tests, Apr. 8, 1944. RL-S-11
 Platt, J. B., et al. *Magnetron Stabilizing Tuner*, Dec. 2, 1943. RL-473
 See Lyman, E. R. RL-714
 Handbook of Maintenance Instructions for AN/APA-40 (Micro-II Mark II) Airborne Attachment to AN/APS-15, Feb. 7, 1945. RL-M-194
 Platzman, R., see Evans, J. E. RL-451
 Polk, I. *Synchro Test Equipment and Test Procedure*, Mar. 7, 1944. RL-434
 Pollard, E. C. *Performance Report of the High-Power Ground System*, June 22, 1942. RL-373
 See Meagher, R. E. RL-49
 Elimination of Ground Clutter, Mar. 13, 1944. RL-526
 Poole, A. R., see Keary, T. J. RL-808
 Porterfield, C. F., see Chu, L. J. RL-486
 Posin, D. Q., see Clarke, H. F. RL-731
 Poté, A. J. *Adjustment of Horn Antennas and Antenna Coupling Units at Frequencies Between 1700 and 2000 Kilocycles*, Feb. 20, 1944. RL-511
 See Lawrence, R. B. RL-512
 Pound, R. V. *Stub Supports in $\frac{1}{2}$ " Coaxial Lines*, May 19, 1942. RL-232
 Phase Distortion in Broad-Band Stub Supports, Aug. 17, 1942. RL-237
 An S-Band Crystal Mixer, Dec. 14, 1942. RL-242
 Comparison of the Frequency Sensitivities of Series and Shunt TR Junctions, Jan. 20, 1943. RL-247
 R. Berger. Preplumbing of Tees for G-Band, Nov. 3, 1942. RL-238
 A Microwave Frequency Discriminator, Aug. 4, 1945. RL-662
 Frequency Discrimination of Local Oscillator Tubes Due to High-Q Load Circuits, Feb. 27, 1945. RL-694
 An Electronic Frequency Stabilization System for CW Microwave Oscillators, Oct. 1, 1945. RL-815
 A Duplex Communication System for Microwaves, Nov. 20, 1945. RL-830
 An Improved Frequency Stabilization System for Microwave Oscillators, Oct. 26, 1945. RL-837
 Powell, V., see Fox, M. RL-501
 Preston, W. M. *Tune-up Procedure for 3-Cm R.F. Systems*, May 25, 1942. RL-160
 Matching, Losses and Frequency Sensitivity of a 3-Cm R.F. System, May 25, 1942. RL-161
 Rotary Joints with E-Stub Transformers, Dec. 18, 1942. RL-243
 See Platt, J. B. RL-473
 Siting and Range of Microwave Beacons, July 5, 1944. RL-590
 Purcell, E. M. *Wave Guide Components and Instruments for the 1.25 Cm Region*, Dec. 3, 1942. RL-165
 A Method for Measuring the Absolute Gain of Microwave Antennas, Jan. 3, 1943. RL-168
 et al. K-Band Coax Antennas with a Line Source and Shaped Cylindrical Reflector, Nov. 3, 1944. RL-624

CONFIDENTIAL

- Rado, G. T. *Measurements of the Attenuation of K-Band Waves by Rain*, Mar. 7, 1945. RL-603
- Ragan, G. L. *Loss Measurement by Two-Probe Power Reversal Method*, Dec. 7, 1942. RL-240
See Reed, J. RL-255
See Clarke, H. F. RL-1071
- Ramsey, N. F. *Airborne 3-Cm Radar Equipment for AI and ASV Applications*, May 22, 1942. RL-27
et al. *Advances Development of 3.3-Cm System*, May 20, 1941. RL-24
et al. *Photographs of the PPI Indicator Tube with 3-Cm ASV over Water and Land*, Oct. 27, 1942. RL-381
- Rawcliffe, R. D. *Deflection Yoke Design Information*, Feb. 23, 1945. RL-674
et al. *Focus Coil Control for Cathode Ray Tubes*, May 17, 1944. RL-S-17
- Raymond, R. C. *Scattering of 10-Cm Radiation by Model Aircraft*, May 21, 1942. RL-156
See Chance, B. RL-7
- Redheffer, R. M. *Radome Bulletin Number 2, An Outline of the Electrical Properties of Radomes*, Dec. 20, 1943. RL-483-2
et al. *Radome Bulletin Number 4, Transmission and Reflection of Single Plane Sheets*, July 12, 1944. RL-483-4
et al. *Radome Bulletin Number 6, Radomes and System Performance*, Nov. 17, 1944. RL-483-6
et al. *Radome Bulletin Number 7, The Measurement of High Reflections at Low Power*, Nov. 20, 1944. RL-483-7
et al. *Radome Bulletin Number 8, The Matching of High Standing Wave Ratios*, Dec. 22, 1944. RL-483-9
See Dowker, Y. RL-483-10
et al. *Radome Bulletin Number 11, Electrical Properties of Double-Wall and Sandwich Radomes*, Feb. 1, 1945. RL-483-11
et al. *Radome Bulletin Number 12, Transmission and Reflection of Parallel Plane Sheets*, Jan. 26, 1945. RL-483-12
et al. *Radome Bulletin Number 13, Elliptical Polarization Produced by Striplined Radomes*, Feb. 12, 1945. RL-483-13
See Dowker, Y. RL-483-14
et al. *Radome Bulletin Number 15, The Measurement of Dielectric Constants in the One-Centimeter Band*, May 11, 1945. RL-483-15
See Dowker, Y. RL-483-17
et al. *Radome Bulletin Number 18, The Dependence of Magnetron Pulling on Radome Shape and Orientation*, Mar. 1, 1946. RL-483-18
- Reed, J., et al. *Capacity (Choke) Couplings as Rigid and Non-Rigid Waveguide Connectors*, Aug. 27, 1943. RL-255
et al. *H2X Range Unit for Navigation and Bombing*, Aug. 23, 1942. RL-342
et al. *Type J and A Test Unit*, Aug. 21, 1943. RL-343
- Rat Race Duplexing, Feb. 4, 1946. RL-888
- Reed, J. (Continued)
et al. *Use and Derivation of A, Z, 0 Chart*, May 18, 1943. RL-T-14
- Reed, J. C. *SB-846B S-Band Oscillator*, Feb. 26, 1946. RL-954
et al. *Preliminary Instruction Book for Shore Bombardment Beacon Navy Model Mark 2 Mod 0 and Mod 1*, Oct. 31, 1944. RL-M-185
- Reed, W. O. *Linar-Controlled Blocking Oscillator*, Oct. 29, 1942. RL-214
et al. *Multibeam Pulse Generators*, Oct. 15, 1942. RL-278
See Bostick, W. H., May 19, 1942. RL-211
et al. *The Use of Synchro for Radial Time Base Displays*, Mar. 21, 1946. RL-941
- Rehkopf, H. L., see Bostick, W. H. RL-217
See Bostick, W. H. RL-218
See Bostick, W. H. RL-219
See Bostick, W. H. RL-463
See Bostick, W. H. RL-470
See Bostick, W. H. RL-545
See Bostick, W. H. RL-546
et al. *Equivalent Circuit of a Pulse Transformer Core*, Mar. 20, 1945. RL-666
- Riblet, H. J. *X-Band Horizontally Polarized Non-directional Antennas*, Apr. 22, 1944. RL-489
et al. *S-Band Horizontally Polarized Non-directional Antennas*, Feb. 14, 1944. RL-517
et al. *Aspen Aircraft Antenna*, Aug. 25, 1944. RL-519
See Birchard, B. L. RL-577
et al. *S-Band Vertically Polarized Non-directional Antennas*, Dec. 20, 1944. RL-623
et al. *Slotted Dipole Impedance Theory*, Nov. 21, 1945. RL-772
See Gilbert, E. N. RL-796
See Barker. RL-871
See Barker. RL-976
- Rice, P. J. *Comparative Photographs of 1- and 5-Microsecond Signals*, Dec. 16, 1943. RL-492
- Richardson, J. E., see Cook, J. E. RL-911
- Ricker, C. R. *Instruction Manual for Model 17 Modulator*, Mar. 1, 1946. RL-M-187
et al. *Instruction Manual for Model 20 Laboratory Modulator*, Feb. 19, 1946. RL-M-232
- Rieke, P. F. *Analysis of Magnetron Performance, Part I, Equivalent Circuit, Method, Applications*, Sept. 16, 1942. RL-229
et al. *R.F. Loading of 10-Cm Magnetrons*, Aug. 24, 1942. RL-221
et al. *Adjustment of Magnetron Frequency by an External Tuner*, Sept. 6, 1943. RL-412
See Evans, J. E. RL-451
See Fletcher, R. C. RL-809
See Evans, J. E. RL-1051
- Rierdan, R. C., et al. *Operating Instructions for the Model 417 Klystron for Use as a Local Oscillator in Radar Receivers*, May 6, 1942. RL-M-108
- Rieth, W. M. *MHF Mobile Height Finder Modified SCR-615*, Sept. 20, 1943. RL-444
et al. *AN/CPA-7 Operations Room Equipment Supply*

CONFIDENTIAL

- Rieth, W. M. (Continued)
menting Radio Set AN/CPS-1, July 2, 1945. RL-M-228
- Risner, J. R. *Characteristics of Horn Feeds as Rectangular Waveguide*, Dec. 28, 1945. RL-656
 See Keary. RL-808
et al. Linear Array for Use in the AN/APS-23 Antenna, Mar. 19, 1946. RL-974
- Roberts, A., *et al. A Beacon Prospectus with a Pictorial Brief of BGS*. RL-357
RIPS (AN/UPN-1, 2) an Ultra-Portable S-Band Radar Beacon and Its Tactical Uses, June 24, 1944. RL-583
- Possible Radar Solutions to the Problem of Accurate Sighting of Field Artillery*, Apr. 7, 1944. RI-S-12
Notes on the Rebecca-II System from Information Obtained at TRE, Aug. 25, 1943. Informal RI-71
- Roberts, S., *et al. Measuring Instruments for Three Centimeters*, Mar. 9, 1942. RL-26
A Simplified Analysis of Conversion Loss of Crystal Converters, July 3, 1943. RL-253
Conversion Loss Measuring Apparatus for Crystals in the 3-Cm Band, Aug. 3, 1943. RL-257
Noise Temperature Measuring Apparatus for Crystals as 10,000 to 30-Megacycle Converters, Feb. 11, 1943. RL-296
Theory of Noise Measurements on Crystals as Frequency Converters, Jan. 20, 1943. RL-293
 See Alexander, R. M. RL-25
 See Dicke, R. H. RL-287
 See Huntington, H. B. RL-256
 See Ramsey, N. F. RL-24
et al. Comparisons of the Usual Methods of Measuring Conversion Loss of Crystals and a New Empirical Method, Aug. 31, 1943. RL-408
Operation of 1N23 Crystal Rectifiers, Dec. 14, 1943. RL-426
- A Feedback Circuit for Measuring Output Noise Ratio of Crystal Rectifiers*, Jan. 10, 1943. RL-667
A Method of Rating the Stability of Oscillators for MTI, Oct. 16, 1945. RL-819
1N21 Loss Measuring Set Type 7368, June 29, 1944. RL-M-171
1N21 Noise Measuring Set Type 7438, Dec. 21, 1944. RL-M-190
- Robertson, R. McG. *Variable Fifth Waveguide Scanners for Eagle (AN/APQ-7) and GCA (AN/MPN-1)*, Apr. 30, 1940. RL-840
Design Considerations for an Improved Interception (AI) Radar, The AN/APS-21 System, Dec. 15, 1945. RL-868
- Robinson, C. S., Jr. *Cathode Temperatures in Magnetrans*, Mar. 31, 1942. RL-90
Operating Characteristics of the 707A Reflex Oscillator (McNally Tube), June 9, 1942. RL-233
Operating Characteristics of the 707A Reflex Oscillator (McNally Tube), Supplement to Report 53-3. RI-234
Operating Characteristics of the 417 Reflex Klystron. RL-235
- Robinson, C. S., Jr. (Continued)
Temperature-Compensated 707A (McNally Tube). RL-236
- Robinson, C. V. *Pill Box Antenna for Glide Path*, Nov. 9, 1942. RL-260
Horizontally Polarized 9.1 cm Biconical Horn Beacon Antenna, Nov. 10, 1942. RL-263
Rapid Scanning, High Resolution Antennas, Preliminary Report, Feb. 15, 1943. RL-265
 See Van Atta, L. C., Mar. 3, 1943. RL-269
 See Pearson, M. D. RL-688
- Rochester, N. *Cryptola*, Feb. 17, 1942. RL-153
- Rogers, J. R. *ARO Range Follow-up Unit*, Mar. 19, 1943. RL-331
- Rollefson, R., *et al. Minimum Allowable Negative Backswing after Pulses*, Apr. 13, 1943. RL-363
 See Hartman, L. A. RL-571
- Rothman, R. F. *Results of Tests on Use of Rebecca-Eureka by the Army Ground Forces*, July 26, 1944. RL-500
- Rosenberg, P. *Linearity of Standard Wire-Wound Volume-Control Type Potentiometers*, Feb. 3, 1943. RL-313
Specification of Performance Tests for PPI Sinusoidal Potentiometers, Types RL10E and RL14, May 25, 1943. RL-316
Present Status of Potentiometer Projects in the Radiation Laboratory, June 15, 1943. RL-318
Potentiometer Type RL-B for Azimuth and Elevation Indication on Magnetically Deflected Cathode-Ray Tubes, July 15, 1943. RL-409
Sinusoidal Potentiometer Types RL10CB, RL10CD, SL10E, and RL14, Aug. 16, 1943. RL-423
Sinusoidal Potentiometers Types RL11, RL15, RL204, Dec. 16, 1943. RL-459
Tokyo H2X Photographs. Comparison of Operational PPI Photographs with PPI Predictions of the Ultrasonic Radar Trainer, Mar. 24, 1945. RL-715
 See Frankel, S. RL-1050
Instruction for Installation and Maintenance of Waffle Relief Maps in Ultrasonic Trainers, Apr. 30, 1945. RL-M-206
Specifications for 15-Mc Supersonic Crystal for Crystal Cartridges Types 3 and 5B, Jan. 22, 1945. RL-S-35
Ultrasonic Radar Trainer PPI Photographs of a Simulated H2X Bombing Mission over Tokyo, Mar. 24, 1945. RL-S-45
Velocity of Propagation of 15-Mc Ultrasonic Pulses in Liquids, Nov. 5, 1945. RL-S-56
- Roth, W. *Foiling Simulator*, May 10, 1944. RL-556
QA-2B Servo Adaptor, Dec. 16, 1944. RL-645-1
 See Nathe, R. U. RL-645-2
 See Hodder, W. RL-645-13
Nosmo Doppler Simulator, Feb. 1, 1946. RL-857
A Displacement or Velocity Servo Amplifier, Feb. 25, 1946. RL-1015
et al. Preliminary Technical Manual for Falcon Trainer AN/APG-13-T1, Oct. 20, 1944. RL-M-182
- Rovner, L. *Hygraph Instruction Manual*, Aug. 8, 1945. RL-M-230

CONFIDENTIAL

- Rowland, H. *Absorption Coefficient of a Styraloy Filled Coaxial Line*, Mar. 4, 1946. RL-827
New Type Probe for Coaxial Standing Wave Detector, Feb. 8, 1946. RL-835
Broad Band Bi-Conical Vertically Polarized Dipole, Feb. 6, 1946. RL-851
Double Skinback Antenna, Mar. 29, 1940. RL-852
Rubenstein, P. J., *see* Kerr, D. E. RL-400
See Fishback, W. T. RL-478
See Katz, I. RL-547
See Fishback, W. T. RL-568
Over-Water Transmission Measurements, 1944. Part I; Preliminary Analysis of Radio and Radar Measurements, Dec. 16, 1944. RL-649
See Fishback, W. T. RL-799
Russell, J. B. *Computers for Radar Control of Plane-to-Plane Gunfire*. 14-130
Saad, T. S. *X-Band Low-Pressure Tests*, Dec. 10, 1942. RL-241
X-Band Measurements at Low Pressure, May 18, 1943. RL-250
Samson, E. W., *see* Sturtevant, J. M. RL-078
Introduction to Alternating Currents, Q Values, and Transmission Lines, Aug. 29, 1944. RL-T-17
Samuelson, P. A. *Analysis of Tracking Data. Description of Calculations*, Oct. 3, 1944. RL-628
Sands, D. N., *see* Bailey, F. S. RL-570
Saxon, D. S., *see* Baños, A. RL-748
General Theory of Electronic Beam Modulators, Mar. 15, 1946. RL-758
Sayre, D., *et al.* *Computer Mark 14 AN/APA-30 XN-1 Instruction Manual*, Oct. 16, 1944. RL-M-179
Pulse Doppler with Reference to Ground Speed Indication, Mar. 20, 1944. Informal RL-63
Schneider, E. G. *Brief Description of MEW Microwave Early Warning*, Sept. 7, 1943. RL-428
Schreiner, K. E., *see* Deerpake, W. J. RL-S-67
Schultz, Ems. C., *see* Nicholson, Mar. 13, 1946. RL-782
Schultz, H. L. *Lighthouse Tube Transmitter-Receiver LITE MK I*, Sept. 10, 1943. RL-429
See Longacre, A. RL-768
et al. *Firefly Moving Vehicle Detector AN/APS-27*, Feb. 18, 1946. RL-994
Schuman, R. H. *Regular Report on the Maintenance Group*, Nov. 26, 1941. RL-61
Schumb, W. C., *see* Eisenstein, A. S. RL-813
Schwartz, J., *see* Austin, Aug. 30, 1945. RL-S-58
Schwinger, J. S. *Theory of Obstacles in Resonant Cavities and Waveguides*, May 21, 1943. RL-205
Scott, E. J. *Slip-Ring Assembly for MK 56 Director*, Mar. 26, 1946. RL-877
Seely, S. *Regular Report on the NT-3, The Ten-Centimeter Truck System*, Oct. 22, 1941. RL-58
See Linford, L. B., Oct. 9, 1941. RL-41
Features and Operations of Radio Set SCE-582, Feb. 15, 1943. RL-394
Theory of Impedance and Admittance Diagrams and Allied Subjects, Feb. 18, 1943. RL-T-10
Selove, W. *Detector Cancellation Error as a Function of Carrier Frequency*, Oct. 31, 1945. RL-859
Selove, W. (Continued)
Notes on MTI Receivers, Mar. 25, 1946. RL-1010
Dynamic-Range Compression for MTI, Mar. 15, 1946. RL-1016
An Automatic Noise-Figure Meter, Mar. 20, 1946. RL-1017
Severinghaus, J. W. *Instructions for Operation of High Gain Video Amplifier for P4-E Synchroscope*, June 1, 1944. RL-M-166
See Jacobson, E. A. S. RL-M-174
See Jacobson, R. A. S. RL-M-180A
Instructions for TS-416/AF Check Set, Feb. 11, 1946. RL-M-234
Sewell, E. F., *see* Eisenstein, A. S. RL-813
Shapiro, H., *see* Forbes, G. D. RL-791
Supersonic Delay Lines, Mar. 15, 1946. RL-850
Glossary of Terms Used in Connection with Radiation Laboratory Radar, Nov. 15, 1943. RL-M-144
Shapiro, I., *see* Katz, I. RL-M-142
Sheckels, G. K., *see* Fairbank, J. D. RL-576
Sheridan, J., *see* Roberts, A. RL-357
Sheridan, J. C. *Computers for Radar Control of Plane-to-Plane Gunfire*. 14-130
Sheriff, W. B., *see* Davenport, L. L. RL-1028
Sherman, D. F. *Two Circularly Polarized S-Band Horns*, Jan. 15, 1946. RL-080
An X-Band Hemi-Isotropic Radiator, Jan. 10, 1946. RL-981
Dipole Arrays Backed by Reflecting Sheets, Mar. 14, 1946. RL-1014
Sherr, R., *see* Nicholson, D. B. RL-782
et al. *Instruction Manual for Automatic H2X Camera Model A*, May 23, 1944. RL-M-103
et al. *Temporary Instruction Manual for Automatic Radar Camera Model B*, Apr. 15, 1944. RL-M-104A
et al. *Temporary Instruction Manual for Automatic H2X Camera Model B*, May 1, 1944. RL-M-104B
Sherwin, C. W. *Plan-Position Indicator Using a Sinusoidal Potentiometer*, Dec. 30, 1942. RL-312
Indicators for a Ground-Controlled Approach System, July 1, 1943. RL-317
Clamping Tubes, May 12, 1944. RL-572
Operating Instructions for the Model B PPI Indicator Central, Apr. 9, 1942. RL-M-107
Shoemaker, F., *see* Mann, M. M. RL-007
Siehak, W. *Double Dipole Rectangular Waveguide Antennas*, June 20, 1943. RL-273
One-sided Inductive Irises and Quarter-wave Cumulative Transformers in Waveguide, Nov. 17, 1943. RL-426
See Purcell, E. M. RL-624
APQ-13 60-Inch Antenna, Aug. 1, 1945. RL-751
See Cady, W. M. RL-848
Siegert, A. J. P. *On the Fluctuations in Signals Returned by Many Independently Moving Scatterers*, Nov. 12, 1943. RL-465
On the Appearance of the A-Scope when the Pulse Travels through a Homogeneous Distribution of Scatterers, Nov. 9, 1943. RL-466

CONFIDENTIAL

- Siebert, A. J. F. (Continued)
 See Bartelink, K. H. B. RL-530
Fluctuations in the Return Signals from Random Scatterers, Jan. 24, 1946. RL-773
- Silver, S. *Contribution of the Dish to the Impedance of an Antenna*, Sept. 17, 1943. RL-442
 See Pao, C. S. RL-479
Double-Curvature Surfaces for Beam Shaping with Point-Source Feeds, June 15, 1945. RL-691
Analysis and Correction of the Impedance Mismatch due to a Reflector, Sept. 25, 1945. RL-810
- Simmons, E. C., et al. *Instructions for TRK-2RL Impedance Bridge*, Feb. 13, 1946. RL-M-257
- Simonds, W. N., Jr. *Technical Manual for SSV Trainer (RCC Model only)*, Mar. 15, 1944. RL-M-160
 See Roth, W. RL-M-182
- Slasheimer, R. L. *A Final Report on AN/APG-10*, Mar. 1, 1946. RL-874
- Sine, A. P., et al. *History of AN/APG-5*, ARO, Jan. 15, 1946. Div. 14-323.11-M4
- Sitterly, B. W. *Elements of Loran*, Mar. 8, 1944. RL-499
 See Pierce, J. A. RL-582
Handbook of Procedures for Mobile Charting Units, Air Transportable Loran System, Mar. 30, 1946. RL-M-183
- Slater, J. C. *Noise and the Reception of Pulses*, Feb. 13, 1941. RL-115
Theory of the Magnetron Oscillator, August 1941. RL-118
Microwave Transmission, Oct. 16, 1941. RL-121
Resonant Modes of the Magnetron, Aug. 31, 1942. RL-182
Forced Oscillations in Cavity Resonators, Dec. 31, 1942. RL-188
Input Impedance and Tuning of Magnetron Cavities, Feb. 3, 1943. RL-196
Theory of Magnetron Operation, Mar. 8, 1943. RL-200
Operation and Testing of Reflex Oscillators, June 18, 1945. RL-74
Lecture Notes. RL-T-1
- Slawwhite, W. R., et al. *Handbook of Maintenance Instructions for AN/APA-53 Indicator Assembly*, Oct. 24, 1945. RL-M-243
 et al. *Handbook of Maintenance Instructions for AN/AIC-6 Intercommunication System*, Oct. 23, 1945. RL-M-244
- Slusser, E. A. *AN/APG-21 (Terry)*, Aug. 25, 1945. RL-794
 See Hodges, H. T. RL-M-152C
AN/APG-21, Terry. Div. 14-323.2-M13
Frequency Pulling of ARO 464 Lighthouse Cavities, Feb. 14, 1944. Informal RL-91
The Effects of Cavity Bias on the ARO Cavity Operated by the ARO Modulator, Apr. 27, 1944. Informal RL-91
- Smith, A. G., see Smith, W. V. RL-230
The 4J70-77 Series of Tunable Magnetrons, Feb. 4, 1946. RL-1006
- Smith, C. A., see McLaughlin, D. B. RL-658
 See McLaughlin, D. B. RL-926
Preliminary Instructions for the Manual Bearing Unit, Jan. 9, 1945. RL-M-192
- Smith, J. A. *Radar Detection of Ground Objects from the Groun*, Sept. 15, 1943. RL-426
- Smith, S. A., F. M. Ashbrook. *Intermediate-Frequency Amplifier Overload Characteristics*, Jan. 31, 1946. RL-1032
- Smith, W. O. *A Broad Band TEM Pillbox*, Jan. 11, 1946. RL-901
A Grid-Type R-F Attenuator, Apr. 4, 1946. RL-902
A Flat Plate Beam-Shaping Antenna, Jan. 15, 1946. RL-903
Capacitive Type R-F Attenuators, Jan. 18, 1946. RL-995
- Smith, W. V. *Practical Considerations of Magnetron Design*, Aug. 22, 1943. RL-226
 et al. *Field Patterns in Cold Magnetrons, Including Correlation with Tube Performance and Tunable Design*, Aug. 10, 1943. RL-230
Magnetron Tuning and Stabilization, July 13, 1944. RL-567
 et al. *XCT Final Report*, Mar. 6, 1946. RL-879
- Smullin, L. D. *Measurements of 721A TR Tube Leakage Power*, Mar. 9, 1943. RL-249
 See Leiter, H. A. RL-594
Testing of Fixed-Tuned, Low-Q, ATR Tubes, Dec. 6, 1944. RL-611
1B38 Frc-TR, Dec. 5, 1944. RL-641
 See Ké, T. S. RL-841
S-Band Bandpass TR Tubes, Jan. 23, 1946. RL-971
X-Band Beacon Reference Cavities, Jan. 15, 1946. RL-972
- Sobczyk, A. *Aided Tracking*, Sept. 17, 1943. RL-436
Aided Tracking, Nov. 4, 1943. RL-452
Parallel T Stabilizing Networks for A-C Servos, Mar. 7, 1946. RL-811
- Soller, T., see Nottingham, W. B. RL-309
 See Marcy, H. O. RL-M-137
- Sommers, H. S., Jr. *Mark 151 Director*, Mar. 5, 1946. RL-S-75
- Sonkin, S. *Pulse Transformers*, July 23, 1946. RL-213
- Sorvang, C. M. *A Littlefuse Direct-Reading Wattmeter*, Apr. 28, 1944. RL-548
- Spencer, R. C. *Synthesis of Microwave Diffraction Patterns with Application to Cus's Patterns*, June 23, 1943. RL-272
The Antenna Slide Rule, Series I, June 3, 1943. RL-276
Optical Theory of the Corner Reflector, Mar. 2, 1944. RL-433
Reflections from Smooth-Curved Surfaces, Jan. 26, 1945. RL-661
Fourier Integral Methods of Analysis, Jan. 21, 1946. RL-762-1
 P. M. Austin. *Tables and Methods of Calculation for Line Sources*, Mar. 30, 1946. RL-762-2
 See Austin, P. M. RL-S-58
Paraboloid Diffraction Patterns from the Standpoint of Physical Optics, Oct. 21, 1942. RL-T-7

CONFIDENTIAL

- Stafford, H. A., see Droz, M. E. RL-436
 Stafford, J. W. *Training Apparatus for Radio Set SCR-584*, Aug. 23, 1943. RL-437
 Stanley, L. A. C. B. *Hawkeye Antenna*, Oct. 30, 1945. RL-812
 Starr, M. A. *Plan-Position Indicator for 584 AJ*, Feb. 8, 1945. RL-678
 See Marey, H. O. RL-M-137
 Steele, E. R. *Radome Bulletin Number 16, Some Electrical Aspects of Microwave Sandwich Radome*, May 9, 1945. RL-483-16
 Steenland, A. M., see Risser, J. R. RL-973
 Steinberger, J. *Leaky Waveguide Rapid Scanner*, Nov. 18, 1944. RL-667
 See Eaton, J. E. RL-709
 Broad-Band Coaxial-Line Horn, July 20, 1945. RL-770
 See Chisholm, E. B. RL-771
 See Risser, J. A. RL-973
 Steinke, R. R. *Instruction Manual for Installation of Radiation Laboratory Type B Plugs on Cables*, Dec. 29, 1943. RL-M-149
 Instruction Manual for Installation of Radiation Laboratory Type A Plugs on Cables, Dec. 29, 1943. RL-M-150
 Instruction Manual for Installation of Chieftain Tool Company 1½-Inch Revolving Joint (Drawing No. 61DIC) on Radiation Laboratory Types B-1 and B-2 Cables (Army-Navy Types RG-27/U and RG-28/U), Jan. 22, 1944. RL-M-151
 Stergiopoulos, C. G. *AN/CPS-6 (V-Beam) Antenna*, Feb. 12, 1946. RL-951
 Sterling, J., see Hagler, D. L. RL-M-210
 Stone, A. M. *Progress Reports on TR Tubes*, Jan. 11, 1943. RL-360
 J. L. Lawson. *Infinite Rejection Filters*, June 1, 1943. RL-364
 A Note on Pulse Distortion by Rejection Filters, Sept. 10, 1943. RL-422
 Low-Power R-F Switch, Feb. 23, 1945. RL-075
 Synthetic Radar Echoes in the Presence of Jamming, June 22, 1945. RL-708
 See Lawson, J. L. RL-784
 Synthetic Radar Echoes in the Presence of FM Jamming, Apr. 9, 1946. RL-1035
 Stone, C. E., see Lipkin, H. J. RL-672
 Stout, H. L. *Preliminary Report on Frequency Shift versus Magnetron Box Temperature*, July 3, 1942. RL-220
 See Collins, G. B. RL-80
 Stout, P. R., see McCoy, F. C. RL-508-2
 Strandberg, M. W. P. *Performance of 3-Cu System (D2-1)*, Jan. 5, 1943. RL-355
 Sums Automatic Frequency Control Circuits, Mar. 10, 1945. RL-687
 Automatic Frequency Control of Thermally Tuned Beacon Local Oscillator, Mar. 6, 1946. RL-955
 Distortion in X-Band Detector, Dec. 27, 1945. RL-956
 Video Discriminator Automatic Frequency Control, Mar. 15, 1946. RL-967
 Strandberg, M. W. P. (Continued)
 One Kesh Tunable X-Band R-F Head, Jan. 23, 1940. RL-1019
 Stratton, J. A. *Microwave Interference Patterns*, Mar. 7, 1942. RL-13
 Transmission on 3,000 Mc over Sea Water, July 14, 1942. RL-14
 Transmission on 100 Mc over Sea Water. RL-15
 Transmission on 200 Mc over Sea Water. RL-16
 Transmission on 500 Mc over Sea Water. RL-17
 See Hutner, R. A. RL-21
 L. J. Chu. *Notes on Antenna Design*. RL-123
 R. A. Hutner. *Relation of Radar Range to Frequency and Polarization*. RL-18
 Straus, H. A. *Brief Description of AN/TPG-1, AN/FPG-1, SCR-503, Developmental Seacoast Gun-Laying Radar Sets*, Oct. 8, 1943. RL-450
 Sturtevant, J. M. *Summary of Work on Propeller Modulation at the Radiation Laboratory*. RL-103
 Tests of Beacon Receiver on V-Beam, Dec. 4, 1944. RL-522
 Rotating Corner Reflectors for Ship Identification, Jan. 1, 1945. RL-654
 See Hollingsworth, L. M. RL-977
 et al. *A Synchronization System for Ground Radar Relay*, Jan. 3, 1946. RL-978
 Sudman, I. *Overinterrogation Control of Microwave Beacons*, Dec. 11, 1943. RL-477
 Murk 56 U Chronograph, Apr. 18, 1940. RL-805
 T-5 Field Chronograph for SCR 584, Mar. 15, 1946. RL-908
 Suen, T. J., and E. M. Everhart. *Dielectric Constants and Loss Tangents of Radome Materials*, Jan. 11, 1946. RL-483-25
 Suits, G. H., et al. *Modification of the Amplifier of the AN/APN-2 to Give Sharp Cut-off Wide-Band Response*, Sept. 18, 1944. RL-613
 Sullivan, L. J. *Automatic Plotter RC-308 Used with SCR-584 for Mortar Location*, Apr. 3, 1946. RL-990
 Sullivan, R. J. *The RL 270 Series of Precision Potentiometers*, Mar. 25, 1946. RL-864
 Swartwout, C. J. *K-Band Rapid Scan*, Mar. 15, 1946. RL-900
 Operating Instructions for the K-Band Rapid Scan System, Mar. 20, 1946. RL-M-248
 Swarts, L. E. *The Antenna for Radar Mark 35*, Jan. 29, 1940. RL-1045
 Sydorak, S. G., and L. C. Van Atta. *Graphical Analysis of Beam Patterns from Paraboloid Reflectors*, June 11, 1942. RL-259
 R-F Attenuators, Sept. 7, 1943. RL-404
 Taggart, M. A., see Pearson, M. D. RL-688
 See Find, E. C. RL-760
 A New Fillbox Feed, Nov. 7, 1945. RL-862
 Horn with Metal Lens, Nov. 13, 1945. RL-863
 Tallman, W. C., see Halsbaugh, J. C. RL-790
 Tape, G. F., see Gilbert. RL-609
 Taylor, C. J., see Koehler, J. F. RL-383
 Taylor, R. E. *Ricke Diagrams and Probe-Plate Plunger Charts of Lighthouse Tubes in a Re-entrant Cavity*, July 3, 1944. RL-564

CONFIDENTIAL

- Teeter, C. E., Jr., see Cefola, M. RL-963
 Thickens, R. W. *SG-1 Antenna Mark 2*, Jan. 9, 1945. RL-539
 Thomson, R. F. *Pulse Doppler for Detection of Moving Ground Targets*, Apr. 21, 1944. RL-553
 Tiltou, P. D. *A Proposed Design for MN-180/A Corner Reflector (Float Marker, Radar, Droppable)*, Feb. 5, 1945. RL-S-39
 Tobey, A. R. *Beavertail Height Finder AN/CPS-4*, Dec. 16, 1943. RL-504
 Torrey, H. C., see Huntington, H. H. RL-256
 Towsley, F. E., see Hagler, D. L. RL-M-210
 Tull, W. J. *Flight Behavior of the Flux Gate and Gyroscopic Compensators and Their Effects on GPI*, Apr. 30, 1945. RL-712
 See Chance, R. RL-S-19
 Proposal for Extending the Range of Shoran or M-H Beacon Coverage by Use of GPI, July 20, 1945. Informal RL-91.3
 Turner, E. H., see Sayre, D. RL-M-179
 Tyson, O. A. *Antenna Measuring Equipment*, Oct. 0, 1944. RL-601-1
 Antenna Measuring Equipment, High-Power CW Transmitter for S-Band, Aug. 24, 1944. RL-601-2
 Antenna Measuring Equipment, 100-Db Linear Audio Amplifier, Aug. 23, 1944. RL-601-3
 Antenna Measuring Equipment, Automatic Antenna Pattern Recorder, Jan. 16, 1945. RL-601-4
 Uhlenbeck, G. E. *Theory of Random Processes*, Oct. 15, 1943. RL-454
 Urquhart, K. J., see Gernsheim, K. J. RL-892
 Instruction Manual for Service Modulator Model 9, Sept. 1, 1943. RL-M-131
 Van Atta, L. C. *Antenna Design and Pattern*, Jan. 6, 1942. RL-98
 Effect of Paraboloid Size and Shape on Beam Pattern, Aug. 5, 1942. RL-258
 See Sydorik, S. G., June 11, 1942. RL-239
 C. V. Robinson. *Information on Standard Radiation Laboratory Paraboloid Reflectors*, Mar. 3, 1943. RL-269
 See Harvey, G. G. RL-414
 Van Valkenburg, M. E., see Dunlap, A. S. RL-685
 Van Vleck, J. H. *Atmospheric Absorption of Microwaves*, Apr. 27, 1942. RL-175
 Further Theoretical Investigations on the Atmospheric Absorption of Microwaves, Mar. 1, 1945. RL-664
 The Relation Between Absorption and the Frequency Dependence of Refraction, May 28, 1945. RL-735
 Vane, A. B., et al. *Propagation over Short Paths and Rough Terrain at 200 Mc*, Jan. 18, 1944. RL-468
 See Dicke, R. H. RL-1002
 Vershbow, A. E., see Czapke, E. L. RL-462
 Vineyard, G. *Numerical Calculation of Space Charge Behavior and Power in the Magnetron*, Mar. 29, 1946. RL-201
 Effect of the Tuning Plunger on Operation of 2K33 Type Tubes, Jan. 16, 1946. RL-942
 Vineyard, G. (Continued)
 Electron Optical Studies of the 2K33 Tube, Jan. 17, 1946. RL-943
 Vitter, A. L., et al. *LCT, 300-Mc FM-CW Magnetron*, Feb. 28, 1946. RL-1005
 Vogel, B. R., see Chisholm, E. B. RL-775
 Voorhies, H. G., Jr. *An Experimental S-Band Airborne MTI System*, Mar. 29, 1946. RL-1018
 Walker, R. M. *Broad Band Test Loads*, Oct. 9, 1945. RL-847
 AN/APG-5 (ARO) as a Terroin Clearance Indicator, Jan. 16, 1946. RL-908
 See Clarke, H. P. RL-1071
 Corners, Bends, and Twists in Rectangular Waveguide, July 6, 1944. RL-585
 Dielectric Windows in Waveguide, June 29, 1944. RL-587
 K-Band High-Power Water Load, May 10, 1945. RL-723
 See Fleisher, H. RL-737
 Walworth Waveguide Bends, Jan. 28, 1944. RL-S-3
 N-Band Waveguide Corrosion Proofing, Oct. 6, 1944. RL-S-29
 Wallman, H. *Impulse and Square-Pulse Response of Various Filters*, June 10, 1942. RL-285
 A 70-Mc Wide IF Amplifier, June 20, 1943. RL-307
 Stagger-Tuned I-F Amplifiers, Feb. 23, 1944. RL-524
 Stagger-Damped Double-Tuned Circuits, Mar. 23, 1944. RL-539
 See Suits, G. H. RL-613
 Realizability of Filters, Dec. 8, 1944. RL-637
 Walter, A. *Calculation of Pulse-Forming Networks Having Slow Rates of Voltage Rise*, Mar. 12, 1945. RL-698
 See Fundingsland, O. T. RL-705
 Waltz, M., see Hreznale, W. M., Oct. 5, 1942. RL-291
 See Kuper, J. B. H. RL-443
 See Kuper, J. B. H. RL-717
 See Kuper, J. B. H. RL-872
 Ward, J. E., see Hibbert, J. J. RL-508-3
 Additional Modification, Calibration, and Plotting Procedures for RC-294 Plotting Equipment, Feb. 18, 1946. RL-M-235
 See Horgan, J. D. RL-M-241
 See Horgan, J. D. RL-S-47
 See Reenan, J. W. RL-S-62
 Warner, A. H. *Report of A.A.B. Test on XT-1 at Fort Monroe, Virginia, February-March, 1942*, July 30, 1942. RL-368
 Washburn, C. A. *Sine Potentiometer Tester*, Mar. 21, 1946. RL-940
 Washburn, B. P., see Blackburn, J. K. RL-797
 Waterman, T. H., see Bennett, S. D. RL-604
 See Gaertner, E. R. RL-627
 Weber, H. W. *Preliminary Instruction Manual for AN/APG-15*, Nov. 5, 1944. RL-M-178
 Preliminary Instruction Manual for AN/APG-15, Jan. 3, 1945. RL-M-178B
 Webster, H. F. *Performance of Coupling for 1 1/2-Inch x 3-Inch Waveguide*, Mar. 6, 1944. RL-538

CONFIDENTIAL

- Weekes, D. F. *A Video Delay Line*, Apr. 24, 1943. RL-302
- Weightman, H. G., see Smith, W. V. RL-879
- Weiss, H. G. *Special Report on Tuning Indicators and Automatic Tuning Systems*, Sept. 15, 1941. RL-107
- AEW Tactical Tests at Brigantine*, June 15, 1945. RL-S-50
- Weiss, P. R., and S. A. Goudsmit. *Kinetic Derivation of the Thermal Noise Formula*, Jan. 18, 1943. RL-191
- See Goudsmit, S. A. RL-190
- See Phillips, R. S. RL-532
- See Kennigott, R. L. RL-677
- Wenetsky, H. *Preliminary Handbook of Operating and Maintenance Instructions for Model AN/APA-46 Aircraft Radar Equipment*, June 1, 1945. RL-M-227
- West, C. F., et al. *Pictorial Brief of an Experimental AGL-1 Installation* [May 10, 1943]. RL-377
- et al. *Tests of AGL-1 installed in Tail of B-23D Airplane*, Mar. 5, 1943. Informal RL-94
- West, W. J. *A Four Hour Feed to Give CSC Antenna Patterns*, Mar. 5, 1946. RL-896
- An IFF Mark 5/UNB Feed in the SCI Search Antenna*, Mar. 26, 1946. RL-897
- AN IFF Mark 5/UNB Feed in the AN/CPS-6 Vertical Antenna*, Apr. 10, 1946. RL-898
- An IFF Mark 5/UNB Radiator in the AEH Antenna*, Mar. 20, 1946. RL-899
- Wheaton, H. H., et al. *Instruction Manual for Echo-Box Test Kit*, June 1, 1944. RL-M-185
- General Lecture Series on Radar Components*, Dec. 1, 1944. RL-T-18
- Lecture Outline for Course on AN/APG-13 Falcon*, Aug. 3, 1944. Informal RL-64.2
- Wheeler, G. F., see Halliday, D. RL-763-0
- The AN/APS-32*, Sept. 25, 1945. RL-763-2
- A Photographic Method for Assessment of Bombing Results*, Feb. 28, 1946. RL-939
- Wheeler, G. J. *Reduction of Power Line Noise in Modulators*, Dec. 11, 1944. RL-634
- Electrical and Physical Characteristics of Some Commercial Feed-Through Filters*, Oct. 2, 1945. RL-785
- A Method of Shielding for Filter Insertion Loss Measurements*, Aug. 8, 1945. RL-786
- Whelpton, J. *Admittance Characteristics of Some S-Band Waveguide Fed Dipoles*, Jan. 24, 1946. RL-1082
- White, A. B. *Tabulation of CRT Screen Properties*, May 1, 1945. RL-S-48
- Evaluation of Specifications for P14 CRT Screens*, Jan. 14, 1946. RL-S-71
- White, D. G. *Thumbnail Sketch for December and January 1945*, Feb. 3, 1945. RL-S-40
- Thumbnail Sketch for February and March*, Apr. 2, 1945. RL-S-46
- Thumbnail Sketch for April and May*, May 30, 1945. RL-S-53
- White, H. J., and J. R. Dillinger. *Rotary Spark Gap Modulators*, June 1, 1942. RL-209
- See Perkins. RL-424
- Analysis of Condenser Charging in Line Type*
- White, H. J. (Continued)
- Modulators, Part I, For Linear Reactor Elements*, Sept. 17, 1943. RL-441
- Rectifier Filter Circuit Analysis*, Feb. 17, 1942. RL-T-3
- Rectifier Filter Circuit Analysis*, Nov. 4, 1942. RL-T-12
- White, J. S. *Radome Bulletin Number 3, Ice Formation on Skipshorne Radomes*, Feb. 15, 1944. RL-483-3
- See Leachman, R. B. RL-566
- White, M. G. *Spark Gap Colloquium at Radiation Laboratory, M.I.T.*, July 1942, Sept. 28, 1942. RL-207
- Whitford, A. K. *Report on Hard Tube Modulators and Drivers*, May 26, 1942. RL-212
- See Jerrens, A. S. RL-216
- et al. *AN/APQ-34 R-F Head*, Dec. 31, 1945. RL-888
- Whitham, G. E., see Hite, G. RL-329
- See Hite, G. RL-516
- See Finek, W. L. RL-573
- Whitmer, C. A., see Huntington, H. B. RL-256
- See Roberts, S. RL-408
- A Conversion Loss Set for Testing K-Band Crystal Rectifiers*, Jan. 16, 1945. RL-668
- Whitmer, R. M., see Roberts, A. RL-357
- See J. M. Cunningham. *BGS 10-Cm Radar Beacon*, June 1, 1943. RL-358
- Waveguides without Metal Walls*, May 10, 1945. RL-726
- Range Accuracy of AN/APG-5 (ARO)*, Oct. 15, 1945. RL-820
- Wiener, N. *Response of a Nonlinear Device to Noise*, Apr. 6, 1942. RL-129
- Wiener, J. B., see Johnson, M. H. RL-246
- See McMillan, F. L., Jr. RL-254
- Details of X-Band High-Level TR Tube Test Bench*, Feb. 3, 1944. RL-417
- 3-Cm Magnetron Test Bench Construction and Operation*, Aug. 22, 1942. RL-M-114
- Williams, D. *Comparison of Performance of 10-Cm and 3-Cm Advanced Development Systems*, July 13, 1942. RL-350
- Altitude Determination by Means of a "Vertical FPI"*, July 31, 1942. RL-351
- See Linford, L. B. RL-353
- See Linford, L. B. RL-354
- See Linford, L. B., Dec. 18, 1942. RL-356
- Recent Performance of the 3-Cm Advanced Development System (D2-1)*, June 21, 1943. RL-365
- Wilson, D. G., see Vane, A. B. RL-468
- Winkler, E. D., see Redheffer, R. M. RL-483-15
- See Dowker, Y. RL-483-17
- Window, A. I. *The Sealing of Air at Rotating Shafts and Joints*, Apr. 18, 1944. RL-552
- Winton, D. F., see Miley, H. A. RL-620
- See Miley, H. A. RL-621
- See Miley, H. A. RL-622
- "Hinteroscope" or Fast Sweep Synchroscope*, Apr. 12, 1946. RL-1001

CONFIDENTIAL

- Wischmeyer, C. R. *Resistance-Capacitance Networks*, Sept. 22, 1942. RL-379
- Wolf, J. M. *K-Band Echo Line*, Mar. 26, 1946. RL-974
- Echo Box Application*, Apr. 18, 1946. RL-1040
- See Whenton, H. H. RL-M-165
- Wolfe, H. R., see Keary, T. J. RL-808
- Wood, F. B. *Handbook of Maintenance Instructions for Type TTX-1BL Test Set (Type B)*, January 1944. RL-M-133
- Types TON-1GA (Type Q) and TON-1BL Oscilloscopes*, Apr. 24, 1944. RL-M-140
- See Katz, S. RL-M-142
- See Jacobson, E. A. S. RL-M-143A
- See Jacobson, E. A. S. RL-M-174
- See Katz, S. RL-M-193A
- Handbook of Operating and Maintenance Instructions for Echo Ranges TES-5MK and TES-9MK*, Mar. 24, 1945. RL-M-191
- Handbook of Operating and Maintenance Instructions for Dummy Load TS-253/AP*, Apr. 9, 1945. RL-M-216
- Instructions for Types TFX-11GA, TFX-18GA, TFX-19GA, TFX-30EC, TFX-31EC, Model 51 and Similar Types of Micrometer Frequency Meters*, May 3, 1945. RL-M-217
- Instructions for Type TSK-5SE Spectrum Analyzer*, Feb. 11, 1946. RL-M-231
- See Simmons, E. C. RL-M-237
- See Zink, A. J. RL-M-238
- Catalog of Microwave Test Equipment*, Sept. 30, 1944. RL-S-28
- Woodbury, J. W., see Jelatis, J. G. RL-S-77
- Woodbury, R. B. *Frequency Division with Blocking Oscillators, Part I*, Apr. 10, 1944. RL-544
- Pulse Characteristics of Cavanaugh Rectifier-Type Tubes*, Apr. 30, 1945. RL-704
- Woodcock, W. see Linford, L. B. RL-353
- See Linford, L. B. RL-354
- See Linford, L. B. RL-356
- Woodward, J. E., see Ottens, R. C. Informal RL-91.3
- Woodward, R. H., et al. *Notes on the European and Russian Atlantic S.S. Loran Systems*, Apr. 17, 1945. BBRL-83
- Woodward, W. R., see Sherr, R. RL-M-163
- See Sherr, R. RL-M-164A
- See Sherr, R. RL-M-164B
- Worrell, F. T., see Maun, M. M. RL-607
- Dielectric Phase Shifters for Waveguide*, Sept. 14, 1945. RL-788
- 3-Cm Vertebral Flexible Waveguide*, Oct. 10, 1945. RL-831
- Flexible Waveguides*, Oct. 19, 1945. RL-832
- Worthington, H. R., Jr. *Measurement of Phase in Microwave Antenna Fields by Phase Modulation Method*, Mar. 14, 1946. RL-966
- Mortar Fire Detection*, Apr. 10, 1946. RL-1064
- K-Band Anti-Aircraft Fire Control*, Feb. 21, 1946. RL-1065
- See Millett, W. E. RL-1074
- Yeater, M. L. *Measurement of Pressure in Gas Tubes by a Radio-Frequency Method*, Sept. 9, 1944. RL-432
- Yevick, G. J. *Primary Feeds in Cylindrical Parabolas*, Apr. 23, 1945. RL-686
- Young, D. R. *Radar Beacon, Mark I Mod 1*, May 29, 1944. RL-M-167
- Target Raft Transponder*, Jan. 27, 1944. RL-S-2
- Young, I. B., see Johnson, S. F. RL-M-146
- Young, R. T., Jr. *Waveguide Termination for Measuring Power at 3.2 Cm*, Feb. 24, 1942. RL-89
- Fourier Analysis of Pulses with Frequency Shifts During the Pulse*, Jan. 30, 1943. RL-224
- Frequency and Spectrum Characteristics of Standard Magnetrons and the Effect of Change of Shape of Current Pulse*, Mar. 12, 1943. RL-225
- Spectra of Magnetrons for Long Pulses*, July 5, 1943. RL-228
- Present Status of High Power at S-Band*, Sept. 15, 1945. RL-793
- Yunker, E. L. *Vertebral Type Flexible Waveguide*, June 15, 1944. RL-574
- Dielectric Properties of Water and Ice at K-Band*, Dec. 4, 1944. RL-644
- An Improved K-Band Vertebral Waveguide*, Aug. 25, 1945. RL-770
- See Millett, W. E. RL-1074
- Zabel, C. W., see Colly, N. C. RL-166
- Zeller, H. R. *High-Amplitude Life Test of an Oil-Filled Pulse Transformer*, Jan. 19, 1944. RL-514
- See Bostick, W. H. RL-545
- See Bostick, W. H. RL-546
- See Gremshausen, K. J. RL-880
- Zink, A. J., and F. B. Wood. *Instructions for K-Band Bench Testing*, Apr. 5, 1946. RL-M-238

CONFIDENTIAL

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RADAR MODEL SHOP

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SECTION 14.1—RADAR MODEL SHOP

(Discontinued April 1944)

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SECTION 14.2—NAVIGATION

(Discontinued April 1944)

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CONTRACT NUMBERS, CONTRACTORS, AND SUBJECT OF CONTRACT

<i>Contract Number</i>	<i>Contractor</i>	<i>Subject</i>
NDCrc-25	University of California, Berkeley, California	Resonatron tubes
NDCrc-53	Massachusetts Institute of Technology, Cambridge, Massachusetts	Superseded by OEMsr-262
NDCrc-73	RCA Manufacturing Company, Camden, N. J.	Microwave components
NDCrc-74	RCA Manufacturing Company, Camden, N. J.	Pulse transmitter tubes and receivers for Loran
NDCrc-150	Radio Corporation of America Manufacturing Co., RCA Victor Division, Camden, N. J.	Long-delay and dark-trace cathode-ray tubes
NDCrc-174	Western Electric Company, Bell Telephone Laboratories, New York, N. Y.	3-cm generator
NDCrc-175	Western Electric Company, Bell Telephone Laboratories, New York, N. Y.	Magnetrons and oscillators
NDCrc-192	Westinghouse Electric & Manufacturing Com- pany, East Pittsburgh, Pa.	Laboratory pulsers
NDCrc-203	Massachusetts Institute of Technology, Cambridge, Massachusetts	Superseded by OEMsr-262
NDCrc-205	Western Electric Company, Bell Telephone Laboratories, New York, N. Y.	Development of receivers for long-range navigation sys- tem
OEMsr-2	Western Electric Company, Bell Telephone Laboratories, New York, N. Y.	Pulse timers for Loran
OEMsr-5	Massachusetts Institute of Technology, Cambridge, Massachusetts	Raytheon magnetron model shop
OEMsr-7	General Electric Company, Schenectady, N. Y.	Five experimental permanent magnets
OEMsr-8	General Electric Company, Schenectady, N. Y.	Magnets and receivers, etc.
OEMsr-9	General Electric Company, Schenectady, N. Y.	One Loran pulse transmitter and four tubes
OEMsr-10	General Electric Company, Schenectady, N. Y.	(a) Long-delay phosphors, (b) 10-cm magnetrons, (c) two gun currents
OEMsr-15	Sperry Gyroscope Company, Brooklyn, N. Y.	Antenna parabolas and gears
OEMsr-53	Sperry Gyroscope Company, Brooklyn, N. Y.	Pulse receivers for LRN
OEMsr-61	Massachusetts Institute of Technology	Superseded by OEMsr-262
OEMsr-67	Sperry Gyroscope Company, Brooklyn, N. Y.	Klystron oscillators
OEMsr-73	Westinghouse Electric & Manufacturing Com- pany, East Pittsburgh, Pa.	Pulse transmitters

CONFIDENTIAL

CONTRACT NUMBERS, CONTRACTORS, AND SUBJECT OF CONTRACT (Continued)

Contract Number	Contractor	Subject
OEMar-74	Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.	Laboratory pulsers
OEMar-84	Raytheon Manufacturing Company, Waltham, Massachusetts	3-cm magnetrons
OEMar-118	Sperry Gyroscope, Inc., Brooklyn, N. Y.	Additional Klystron work
OEMar-157	Western Electric Company (Bell Telephone Laboratories), New York, N. Y.	3-cm receiving tube
OEMar-164	Research Construction Company, Cambridge, Mass.	Radar model shop
OEMar-168	Sperry Gyroscope Company, Brooklyn, N. Y.	Crystal mixer receivers
OEMar-180	General Electric Company, Schenectady, N. Y.	Permanent gas thyatrons
OEMar-191	Massachusetts Institute of Technology (Laboratory for Insulation Research), Cambridge, Mass.	Development and wide frequency investigation of di-electrics
OEMar-233	General Electric Company, Schenectady, N. Y.	AGL-1 airborne gun-laying radar system
OEMar-248	General Electric Company, Schenectady, N. Y.	Long-delay and dark-trace cathode ray tubes
OEMar-252	RCA Victor Division (RCA Laboratories), Camden, N. J.	Noise reduction system
OEMar-262	Massachusetts Institute of Technology, Cambridge, Mass.	Radiation Laboratory
OEMar-281	Link Aviation Devices, Inc., Binghamton, N. Y.	A1-10 training gear
OEMar-288	Westinghouse Electric & Manufacturing Company, Bloomfield, N. J.	Cold emission power tubes
OEMar-335	Polytechnic Institute of Brooklyn, Brooklyn, N. Y.	Development of attenuators and RF test equipment
OEMar-344	Georgia School of Technology, Atlanta, Ga.	Highly selective audio-amplifier and narrow-band lock-in type amplifier
OEMar-358	Franklin Institute (Bartol Research Foundation), Philadelphia, Pa.	Magnetron cathode studies
OEMar-360	Franklin Institute (Bartol Research Foundation), Philadelphia, Pa.	Electronic switch
OEMar-362	Purdue Research Foundation, Lafayette, Indiana	Crystal detectors
OEMar-369	Zenith Radio Corporation, Chicago, Illinois	Lightweight range-only unit
OEMar-380	Sylvania Electric Products, Inc., (Formerly Hygrade Sylvania, Inc.), Emporium, Pennsylvania	A special tunable intermediate frequency amplifier

CONTRACT NUMBERS, CONTRACTORS, AND SUBJECT OF CONTRACT (Continued)

<i>Contract Number</i>	<i>Contractor</i>	<i>Subject</i>
OEMar-382	Brown University, Providence, Rhode Island	Cathode-ray tube project
OEMar-386	Eastman Kodak Company, Rochester, N. Y.	Microwave absorbent paint
OEMar-387	University of Pennsylvania, Trustees of the Philadelphia, Pa.	Radar ranging system and high-frequency video am- plifiers
OEMar-388	University of Pennsylvania, Trustees of the Philadelphia, Pa.	Crystal research
OEMar-429	Cornell University, Ithaca, N. Y.	Theoretical aid
OEMar-443	RCA Victor Division (License Division Labora- tory), Camden, N. J.	Loran receiver for receiver trainer
OEMar-477	RCA Victor Division, Harrison, N. J.	Tube model shop service for Columbia Radiation Lab- oratory
OEMar-485	Columbia University, Trustees of New York, N. Y.	Columbia Radiation Labora- tory
OEMar-486	Harvey Radio Laboratories, Inc., Cambridge, Massachusetts	Six transmitting sets for long- range navigation project
OEMar-507	Radio Engineering Laboratories, Inc., Long Island City, N. Y.	Thirty-six Loran transmit- ters
OEMar-511	Harvey-Wells Communications, Inc., Southbridge, Mass.	Fifteen Loran receivers
OEMar-540	General Electric Company, Schenectady, N. Y.	Precision aircraft scanners
OEMar-543	General Electric Company, Schenectady, N. Y.	Two truck-mounted XT-1A anti-aircraft fire control radars
OEMar-546	University of Colorado, Boulder, Colorado	Stable noncrystal controlled low-frequency oscillator
OEMar-557	General Electric Company Schenectady, N. Y.	Four (4) AGL-1 equipments
OEMar-560	Kansas State College, Manhattan, Kansas	Time-delay measuring instru- ments
OEMar-582	General Electric Company, Fort Wayne, Ind. and Pittsfield, Mass.	Transformer model shop
OEMar-583	Sylvania Electric Products, Inc., Emporium, Pennsylvania	Special signal generators
OEMar-589	Raytheon Manufacturing Company, Newton, Massachusetts	Transformer model shop
OEMar-609	Leland Electric Company, Dayton, Ohio	Three-phase aircraft alter- nator
OEMar-619	American Machine Defense Corporation	Precision antenna mount for use with the CXBL set (SM prototype)
OEMar-633	Fada Radio & Electric Company, Long Island City, N. Y.	Loran receivers

CONFIDENTIAL

CONTRACT NUMBERS, CONTRACTORS, AND SUBJECT OF CONTRACT (Continued)

<i>Contract Number</i>	<i>Contractor</i>	<i>Subject</i>
OEMsr-634	Carnegie Institution of Washington, Geophysical Laboratory, Washington, D. C.	Cathode-ray tube screens
OEMsr-642	Sperry Gyroscope Company, Garden City, N. Y.	AGL-2 fire control system
OEMsr-652	University of California, Berkeley, California	High-vacuum switch
OEMsr-663	Gillfillen Bros., Inc., Los Angeles, Cal.	Ground-control-of-approach landing systems AN/ MPN-1 (XE-1) and con- struction of two
OEMsr-684	RCA Victor Division (RCA Laboratories), Princeton, N. J.	Lightweight Raccon develop- ment (BUPX)
OEMsr-689	Foxboro Company, Foxboro, Massachusetts	Trainer for SCR-584, anti- aircraft fire control radar
OEMsr-691	RCA Victor Division (RCA Laboratories), Camden, New Jersey	UHF propagation studies
OEMsr-709	Westinghouse Electric & Manufacturing Com- pany, Bloomfield, N. J.	High-pressure spark gap
OEMsr-723	General Electric Company, Schenectady, N. Y.	Loran receivers
OEMsr-728	State College of Washington, Pullman, Washington	Microwave propagation studies
OEMsr-768	Cornell University, Ithaca, N. Y.	Theoretical aid
OEMsr-770	Harvey-Wells Communications Inc., Southbridge, Mass.	Fifty Loran receivers
OEMsr-777	Western Electric Company (BTL) New York, N. Y.	Interference and field strength study
OEMsr-781	Rensselaer Polytechnic Institute, Troy, N. Y.	Trigger circuits
OEMsr-789	Radio Manufacturing Engineering Laboratories, Inc., Long Island City, N. Y.	Five Loran training equip- ment
OEMsr-805	Harvey Radio Laboratories, Inc., Cambridge, Mass.	Twenty Loran transmitters
OEMsr-812	Fairchild Camera & Instrument Corporation (formerly Fairchild Aviation Corpora- tion), Jamaica, N. Y.	(a) AGL central-station com- puter and (b) AGS gyro sight and spinner mount
OEMsr-821	Franklin Institute (Bartol Research Founda- tion), Philadelphia, Pa.	Crystal clock for Loran re- ceiver
OEMsr-832	Philco Corporation, Philadelphia, Pa.	LHTR unit for ARO radar and construction of six
OEMsr-872	RCA Victor Division, Harrison, N. J.	RF tube development

CONTRACT NUMBERS, CONTRACTORS, AND SUBJECT OF CONTRACT (Continued)

<i>Contract Number</i>	<i>Contractor</i>	<i>Subject</i>
OEMsr-874	Fairchild Aviation Corporation, Jamaica, N. Y.	Range follow-up for ARO
OEMsr-890	Emerson Radio & Phonograph Corporation, New York, N. Y.	Trainer for SH radar
OEMsr-900	Carnegie Institute of Technology, Pittsburgh, Pa.	Dark-trace cathode-ray tubes
OEMsr-918	Galvin Manufacturing Corporation, Chicago, Illinois	BPP, portable radar beacon (AN/PPN-2)
OEMsr-960	Dulmp-Victor, Inc., San Francisco, California	Development of radar scan- ners
OEMsr-972	Galvin Manufacturing Corporation, Chicago, Illinois	Airborne range only ARO
OEMsr-977	RCA Victor Division (License Division Labora- tory), Camden, N. J.	Loran receiver developments
OEMsr-988	Sylvania Electric Products, Inc., Emporium, Pennsylvania	Radar tube for pulsed and CW operation
OEMsr-999	Sylvania Electric Products, Inc., Salem, Massachusetts	Tube model shop
OEMsr-1022	Stevens Institute of Technology, Hoboken, N. J.	Development of electric brushes through power metallurgy
OEMsr-1025	RCA Victor Division, Camden, N. J.	Lightweight tail warning system (AN/APS-13)
OEMsr-1029	RCA Victor Division (License Division Labora- tory), Camden, N. J.	Lodar direction-finding re- ceivers
OEMsr-1032	Kuthe Electric Company, Newark, N. J.	Development of the H-50 hy- drogen thyatron
OEMsr-1043	RCA Victor Division, Lancaster, Pennsylvania	Radar tube model shop
OEMsr-1044	Librascope, Incorporated, Burbank, California	Radar bombing computers and ballistic computer for gun director Mark 56
OEMsr-1052	Galvin Manufacturing Corporation, Chicago, Illinois	BGS beacons, construction of forty
OEMsr-1054	Douglas Aircraft Company, Santa Monica, California	Antenna installation for proj- ect "Eagle" (AN/APQ-7)
OEMsr-1089	International Projector Corporation, New York, N. Y.	Model of scanning antenna for Esge (AN/APQ-7)
OEMsr-1091	Wilcox & Gibbs Sewing Machine Company, New York, N. Y.	Equation solver for SM and SCR-615 trainers
OEMsr-1112	Westinghouse Electric & Manufacturing Com- pany, Sharon, Pa.	Transformers model shop I
OEMsr-1127	RCA Victor Division (National Broadcasting Company), Camden, New Jersey	Relay radar system

CONFIDENTIAL

CONTRACT NUMBERS, CONTRACTORS, AND SUBJECT OF CONTRACT (Continued)

<i>Contract Number</i>	<i>Contractor</i>	<i>Subject</i>
OEMsr-1139	E. I. du Pont de Nemours, Inc., Wilmington, Delaware	Research on sintering of boron and laboratory preparation of pure germanium
OEMsr-1140	Allen B. DuMont Laboratories, Inc., Passaic, New Jersey	P81 indicator units
OEMsr-1141	Allen B. DuMont Laboratories, Inc., Passaic, New Jersey	Development of cathode-ray tube screens
OEMsr-1143	Emerson Radio & Phonograph Corporation, New York, N. Y.	Power supply for lodar receivers
OEMsr-1146	Machlett Laboratories, Inc., Springfield, Connecticut	High-power S-band magnetron
OEMsr-1149	General Electric Company, Schenectady, New York	Gyro lead computer sight for the AGS radar
OEMsr-1162	Massachusetts Institute of Technology (Servomechanisms Laboratory), Cambridge, Massachusetts	Serves for gun director Mark 58
OEMsr-1165	Westinghouse Electric & Manufacturing Company, Bloomfield, New Jersey	K-band transmitter tube developments
OEMsr-1167	Chrysler Corporation, Detroit, Michigan	Radar scanning units for SCR-584 and gun director Mark 56
OEMsr-1186	Sylvania Electric Products, Inc., Salem, Massachusetts	K-band RF head
OEMsr-1199	E. I. du Pont de Nemours, Inc., Wilmington, Delaware	IIARP protective coatings
OEMsr-1212	Western Electric Company, New York	Thermistors for RF power measurement
OEMsr-1218	Western Electric Company (BTL), New York, N. Y.	Broad-band TR and anti TR
OEMsr-1220	Franklin Institute (Bartol Research Foundation), Philadelphia, Pennsylvania	Loran supersonic trainer
OEMsr-1239	Westinghouse Electric & Manufacturing Company, Sharon, Pa.	Transformer model shop II
OEMsr-1242	Chicago Telephone & Supply Company, Elkhart, Indiana	Special winding machine
OEMsr-1269	Utah Radio Products Company, Chicago, Illinois	Design and sample production of pulse transformers
OEMsr-1283	Federal Telephone & Radio Corporation, Newark, New Jersey	High impedance cable
OEMsr-1291	Maguire Industries, Inc., (General Electronics Industries Division), Greenwich, Connecticut	Stabilized scanner for the H2K radar and the construction of five
OEMsr-1295	Sylvania Electric Products, Inc., Emporium, Pa.	Cathode-ray tube screens
OEMsr-1299	General Electric Company, Schenectady, New York	Gun director Mark 56

CONTRACT NUMBERS, CONTRACTORS, AND SUBJECT OF CONTRACT (Continued)

Contract Number	Contractor	Subject
OEMar-1306	General Electric Company, Schenectady, New York	Broad-band TR and anti TR
OEMar-1311	California Institute of Technology, Pasadena, California	Precision measurement of waveguide discontinuities
OEMar-1336	General Electric Company, Schenectady, New York	Stable base unit for radar antenna
OEMar-1337	Sperry Products, Inc., Hoboken, New Jersey	MTH computing radar sight
OEMar-1338	International Business Machines Corporation, Endicott, New York	Counter for Mark III Loran indicator
OEMar-1352	Sylvania Electric Products, Inc., Salem, Massachusetts	Transformer model shop
OEMar-1358	Fairchild Camera & Instrument Corporation, Jamaica, New York	Cameras for aerial radar pho- tography
OEMar-1360	University of Michigan, Ann Arbor, Michigan	Infrared absorption by water vapor
OEMar-1361	American Type Founders, Elizabeth, New Jersey	Antenna mounts for high- resolution radar
OEMar-1377	General Electric Company, Schenectady, New York	K-band crystals
OEMar-1394	General Electric Company, Schenectady, New York	Components for two SCI radars (CXHR)
OEMar-1408	Western Electric Company (BTL), New York, N. Y.	Germanium crystal rectifiers for radar
OEMar-1409	Western Electric Company (BTL), New York, N. Y.	High-power enclosed fixed- gaps
Purchase Order 600,072	Western Electric Company, New York, N. Y.	Procurement of Type D- 160207 oscillator
Purchase Order 600,073	Western Electric Company, New York, N. Y.	Procurement of Type D- 160537 magnetrons
Order TPS-38541	General Electric Company, Schenectady, New York	Procurement of one square wave generator and two oscilloscopes

Note: Subject of contract includes D-1, NDRC.

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TITLES OF DIVISION 14 SUMMARY TECHNICAL REPORTS

SUMMARY TECHNICAL REPORT OF DIVISION 14, NDRC

VOLUME 1 RADAR: SUMMARY REPORTS AND HARP PROJECT.

VOLUME 2 MILITARY AIRBORNE RADAR SYSTEMS (MARS).

VOLUME 3 BIBLIOGRAPHY OF DIVISION 14 AND RADIATION LABORATORY REPORTS.

RADIATION LABORATORY SERIES

(Published by the McGraw-Hill Book Company)

1. RADAR SYSTEM ENGINEERING, Louis N. Ridenour.
2. RADAR AIDS TO NAVIGATION, J. S. Hall.
3. RADAR BEACONS, A. Roberts.
4. LORAN, J. A. Pierce, A. A. McKenzie, R. H. Woodward.
5. PULSE GENERATORS, G. N. Glasoe, J. V. Lebacqz.
6. MICROWAVE MAGNETRONS, George B. Collins.
7. KLYSTRONS AND MICROWAVE TRIODES, D. R. Hamilton, J. K. Knipp, J. B. H. Kuper.
8. PRINCIPLES OF MICROWAVE CIRCUITS, C. G. Montgomery, E. M. Purcell, R. H. Dicke.
9. MICROWAVE TRANSMISSION CIRCUITS, G. L. Ragan.
10. WAVEGUIDE HANDBOOK, N. Marchvitz.
11. TECHNIQUE OF MICROWAVE MEASUREMENTS, C. G. Montgomery.
12. MICROWAVE ANTENNA THEORY AND DESIGN, S. Silver.
13. PROPAGATION OF SHORT RADII WAVES, D. E. Kerr.
14. MICROWAVE DUPLEXERS, L. D. Smullin, C. G. Montgomery.
15. CRYSTAL RECTIFIERS, H. C. Torrey, C. A. Whitmer.
16. MICROWAVE MIXERS, R. V. Pound.
17. COMPONENTS HANDBOOK, John F. Blackburn.
18. VACUUM TUBE AMPLIFIERS, George E. Valley, Jr., Henry Wallman.
19. WAVEFORMS, Britton Chance, F. C. Williams, V. W. Hughes, D. Sayre, E. F. MacNichol, Jr.
20. ELECTRONIC TIME MEASUREMENTS, Britton Chance, R. I. Hulsizer, E. F. MacNichol, Jr.
21. ELECTRONIC INSTRUMENTS, I. A. Greenwood, Jr., D. MacRae, Jr., H. J. Reed, J. V. Holdam, Jr.
22. CATHODE RAY TUBE DISPLAYS, J. T. Soller, M. A. Starr, George E. Valley, Jr.
23. MICROWAVE RECEIVERS, S. N. Van Voorhis.
24. THRESHOLD SIGNALS, J. L. Lawson, G. E. Uhlenbeck.
25. THEORY OF SERVOMECHANISMS, H. M. James, N. B. Nichols, R. S. Phillips.
26. RADAR SCANNERS AND RADOMES, W. M. Cady, M. B. Karelitz, L. A. Turner.
27. COMPUTING MECHANISMS AND LINKAGES, A. Svoboda.
28. INDEX.

CONFIDENTIAL

THE RADIATION LABORATORY SERIES

FROM ITS FORMATION in November 1940 to its dissolution at the end of 1945, the Radiation Laboratory, maintained at the Massachusetts Institute of Technology under contract with the National Defense Research Committee of the Office of Scientific Research and Development, was the foremost U. S. research and development institution in the field of microwave radar. OSRD was instructed by President Roosevelt to record and preserve for the public at large the durable values of the wartime work it sponsored. The series was undertaken by Dr. L. A. DuBridge, director of the Radiation Laboratory. Work on the series has been under way since May 1945, under the general supervision of Louis N. Ridenour, editor-in-chief, and George B. Collins, deputy editor-in-chief.

The series as planned consists of 27 titles and a general index. It has been written and edited principally, but not entirely, by members of the Radiation Laboratory. Since the laboratory has been a principal focus for the interchange of information among all agencies working in radar during the war, it has been able to collect all of the important information in the field.

While the investigations which led to the results reported had the single aim of giving our Army and Navy the best possible military radar equipment, the implications and the usefulness of the basic knowledge thus gained extend far beyond the limited practical field of radar. The part of the electromagnetic spectrum, in which the generation, modulation, reception, and measurement of continuous waves has now become an everyday matter, has been extended to include the frequency range between 30,000 and 300 megacycles per second—a region inaccessible before the war, practically speaking. The work on accurate range measurement by means of radar has given us techniques which enable the measurement of a time interval of a hundred-millionth of a second with the same ease and accuracy which used to characterize the measurement of a thousandth of a second. Advances in our understanding of the design and behavior of vacuum tube circuits, together with great improvements in tubes and other components of such circuits, enable the postwar designer to per-

form by electronic means an astonishing variety of process and measurement and calculating functions which were formerly the province of mechanical devices. The cathode-ray tube, still an instrument of somewhat limited and special utility when we entered the war, has emerged as the basis of a whole new art of measurement and display of complicated data of various sorts. Not only television pictures and radar indications, but also the results of any sort of measurement the instrumentation of which can be reduced to electrical terms, can be displayed on cathode-ray tubes. The lumped-constant electrical circuits of prewar experience have now their analogues in microwave waveguide circuits; and the theory and engineering principles necessary to deal with these circuits have largely been worked out since the war.

It is the aim of the series to treat the advances arising from radar work in a fashion which will emphasize the role of these advances as the basis for the new electronics, rather than to treat each part of the work in terms of its contributions to radar. The editors hope that the usefulness of the series can thus extend over all the fields—of communication, of television, of industrial instrumentation and control, of research in the biological and physical sciences, and of radar itself—in which electronic techniques are of great and increasing applicability and importance.

RADAR SYSTEM ENGINEERING

Louis N. Ridenour

It is the aim of this book to outline the general principles of design of radar systems. On the one hand, it collates, from the standpoint of the radar designer, the detailed information which has been given extensively in the other books of the series; on the other hand, it considers fully the basic considerations which underlie and are particular to systems design. It is intended as a basic treatise and reference book for anyone interested in making any application of radar.

RADAR AIDS TO NAVIGATION

J. S. Hall

The principal aim of this book is to point out in nontechnical form the advantages and limitations of various types of radar as aids to the

solution of various problems encountered in navigation and pilotage. These types include airborne, shipborne and ground-based systems. Radar beacons and other auxiliary equipment are also discussed.

RADAR BEACONS

A. Roberts

This volume deals with the design and use of radar responder beacons. The employment of systems involving beacons for navigation and for identification is critically discussed. Systems using radar sets as interrogators and systems using special interrogators are both treated. Full information is given on the practical experience so far available regarding the field installation, operation, and maintenance of beacons.

LORAN

J. A. Pierce, A. A. McKenzie, R. H. Woodward

This book gives a complete account of the design and use of the long-range pulse navigation system known as Loran, both in its original form and as skywave-synchronized Loran. The greater part of the discussion will be devoted to equipment now in operational use. Sections are included on radio propagation at Loran frequencies and on methods for the computation and preparation of Loran navigational charts.

PULSE GENERATORS

G. N. Glasoe, J. F. Lebacqz

This book deals with the theoretical and practical aspects of the generation of power pulses. Pulse powers in the range of 100 watts to 20 megawatts and pulse durations from 0.03 to 10 microseconds are considered. The treatment is as general as possible, with emphasis on such problems as: pulse formation; the effect of circuit parameters on the pulse shape; pulse power, average power, power transfer, and circuit efficiency; impedance transformation by pulse transformers; and characteristics and design of pulse transformers.

MICROWAVE MAGNETRONS

George B. Collins

This covers quite completely the theoretical and practical aspects of multicavity magnetrons in the frequency range from 1,000 to 24,000

megacycles per second and in the power output range from 10 watts to 3,000,000 watts. The circuit theory and electronics of this type of oscillator are discussed with special attention to the subjects of starting phenomena, electronic tuning, and stabilization of frequency. Practical problems of magnetron design and special applications of the magnetron principle to both pulsed and c-w tubes are dealt with in full. The book concludes with a compilation of the operating characteristics of microwave magnetrons developed during the war.

KLYSTRONS AND MICROWAVE TRIODES

D. R. Hamilton, J. K. Knipp, J. B. H. Kaper

This book is primarily concerned with low-power microwave triodes and klystrons, and their performance as local oscillators, signal generators, and low-power transmitters. A theoretical treatment is given covering the use of triodes and klystrons as mixers, amplifiers, oscillators, and frequency multipliers. The performance of planar triodes with small electrode spacing as low power sources of CW and pulse power is dealt with next. The balance of the book deals with the theory and use of two-cavity and reflex klystrons.

PRINCIPLES OF MICROWAVE CIRCUITS

C. G. Montgomery, E. M. Purcell, R. H. Dicke

Starting from Maxwell's equations, a description is given of guided electromagnetic waves. The concept of impedance is generalized to apply to waveguide circuits. Following a review of low-frequency network theory, general network theorems which apply both to high- and to low-frequency circuits are developed. The properties of waveguide circuit elements are fully discussed. These general properties are applied to the discussion of microwave devices. The results which follow from the symmetry properties of microwave junctions are emphasized.

MICROWAVE TRANSMISSION CIRCUITS

G. L. Ragan

The problems of the transmission of power from one place to another at microwave frequencies are fully discussed in this volume from a practical point of view. The elementary theory of operation and the complete design procedure are described for many essential components of transmission lines. Consideration of power-

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handling capacity, loss, and convenience of use are discussed in relation to the best choice of the type of transmission line for a given application. The use of the circle diagram, matching techniques, and methods for extending the frequency range for good operation are treated.

WAVEGUIDE HANDBOOK

N. Marcuvitz

The Waveguide Handbook will present in compact form all currently available theoretical data, and some experimental data, on the properties of microwave transmission lines, microwave circuit elements (obstacles, windows, discontinuities, bends, junctions and couplings) and of some other structures, such as cavities, which may be considered as composites of these. Data will be given in the form most easily applied in practical circuit design. Theoretical results will be stated in analytical form, but the greater part of the book will consist of graphs presenting results in numerical form. When theoretical results are not available, experimental results may be given. Textual material will be restricted to that needed to explain the form of presentation and, in some cases, to indicate methods of application.

TECHNIQUE OF MICROWAVE MEASUREMENTS

C. G. Montgomery

This book describes in detail the procedures for measuring the properties of microwaves and the circuits in which they are used. After an introduction which discusses the measurable quantities, there is a description of the sources of power suitable for measuring purposes and the means for detecting energy at microwave frequencies. Standing-wave measurements and the determination of impedance are considered. The measurement of wavelength and frequency is similarly treated. Techniques are described for the measurement of power and attenuation covering the whole range of power levels which are encountered. Various microwave devices such as directional couplers, spectrum analyzers, and impedance bridges are treated in detail.

MICROWAVE ANTENNA THEORY AND DESIGN

S. Silver

This book provides a comprehensive survey of theory and design techniques for microwave an-

tennas, and a full discussion of antenna measurement methods. A survey of those parts of electromagnetic and optical theory which are basic to the subject is followed by a series of chapters discussing various types of antenna feeds and the complete antenna systems used for producing all principal types of microwave beams. The aberrations and special features of microwave optical systems are discussed in relation to rapid scan antennas.

PROPAGATION OF SHORT RADIO WAVES

D. E. Kerr

Because of the intensive development during the war of radar and communication equipment operating at frequencies above 100 megacycles per second considerable effort has been directed toward investigating the propagation characteristics of radiation at frequencies too high to be effected by the ionosphere. It is the purpose of this book to collect and summarize the results of these investigations, in such a way that they will be readily available to present and future workers in the field.

MICROWAVE DUPLEXERS

I. D. Smullin, C. G. Montgomery

This book deals with the general problem of using a single antenna for both receiving and transmitting and is, therefore, mainly of interest for pulsed transmission applications. A discussion is given of the low-level properties of TR and ATR tubes and the methods for their design. The high-level operation is described in detail and discussed in connection with the properties of the gases used for filling the tubes. A chapter is devoted to the discussion of the circuits used for duplexing, including both the simpler branched circuits and the more complex balanced types. There is a chapter on how to measure the performance of the tubes as well as the duplexer as a whole.

CRYSTAL RECTIFIERS

H. C. Torrey, C. A. Whitmer

This book discusses the theory, properties, manufacture, and use of the silicon and germanium point-contact rectifiers which have been developed for use as microwave converters and for other circuit applications. Treatment of the theory of semiconductors, of the semiconductor-metal contact, of frequency conversion by recti-

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fiers and of noise generation by crystals is followed by engineering information on the production and use of practical crystal types. Crystal rectifiers with special properties are also considered. Low level detectors, high inverse voltage crystals, and crystals with negative i-f conductance are discussed in detail.

MICROWAVE MIXERS

R. V. Pound

This book deals with the microwave portions of receivers for very high frequency waves. After a general discussion of the various types of receiving systems and their relative merit, the conversion frequency problem is treated in all its aspects. Practical mixers are described and their design problems are discussed. A chapter is devoted to the special properties of balanced mixers. Schemes are described for maintaining a constant absolute frequency of the local oscillator as well as those for stabilizing to a constant frequency difference between the transmitter and local oscillator.

COMPONENTS HANDBOOK

John F. Blackburn

This book codifies available information on the properties and characteristics of electronic components. It includes the results of original measurements made at the Radiation Laboratory on manufactured components. Fixed components—wires, cables, resistors, capacitors, inductors, and transformers—are treated in the first part, which also includes information on various types of contact rectifiers. The second part deals with electromechanical devices: potentiometers, variable condensers, rotary inductors, instrument meters, tachometer generators, relays, magnetic clutches, and piezoelectric crystals. Part 3 is devoted to vacuum tubes, and includes a brief summary of the properties of cathode-ray tubes.

VACUUM TUBE AMPLIFIERS

George E. Valley, Jr., Henry Wallman

This book seeks to analyze completely, to give design principles of, and to describe the special constructional techniques pertaining to many important types of amplifiers. The amplifiers selected for treatment are, in general, characterized either by very high gain, by large band-

width, by great dynamic range, or by precise response. Following a theoretical introduction, video amplifiers, wide-band high-frequency band-pass amplifiers, low-frequency band-pass amplifiers, and direct-coupled amplifiers are discussed. Noise in amplifiers is treated rigorously, and the practical design of minimal noise amplifiers described.

WAVEFORMS

*Britton Chance, F. C. Williams, V. W. Hughes,
D. Sayre, E. F. MacNichol, Jr.*

This volume describes the generation and use of precisely controlled voltages and currents having various time dependence and duration. Introductory chapters present new methods of wave shaping by linear circuit elements and negative feedback amplifiers. The properties of vacuum tubes as nonlinear circuit elements and their applications to waveform manipulations are presented in detail. The operation of various types of multivibrators, blocking oscillators, and other basic circuits, is discussed with special emphasis upon wave shape and stability. Waveforms of precisely adjustable duration are emphasized. Other chapters treat the use of linear and nonlinear circuit elements in modulation, demodulation, frequency multiplication and division, and in rapidly executed mathematical operations.

ELECTRONIC TIME MEASUREMENTS

Britton Chance, R. I. Hulsizer, E. F. MacNichol, Jr.

This book opens with a survey of the use of precision timing methods in distance finding with detailed designs of precision ranging circuits depending upon both manual and automatic control. The second part treats electrical circuits using supersonic delay elements for the cancellation of recurrent waveforms as used in moving target indication systems. The third part presents several precision methods for data transmission employing pulse timing techniques.

ELECTRONIC INSTRUMENTS

*I. A. Greenwood, Jr., D. MacRae, Jr., H. J. Reed,
J. V. Holdam, Jr.*

Details of the design of simple electronic computing systems are followed by several illustrative applications to the solution of the aircraft navigation problem and the synthesis of

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radar data for training purposes. A second part is devoted to the practical aspects of the design of lightweight, low-power electronic servomechanisms, and a number of practical examples taken from various radar and fire-control applications are included. The last two parts treat the practical design of accurately stabilized power supplies and the problems of design and construction of prototype equipment with special emphasis upon lightweight techniques and the limitations of available components.

CATHODE-RAY TUBE DISPLAYS

J. T. Soller, M. A. Starr, George E. Valley, Jr.

Those interested in the design of instruments employing cathode-ray tubes will find in this book a practical discussion of their basic characteristics, principles of operation, and methods of application. The design and construction of beam deflection and focusing devices, optical projection and measuring apparatus, and auxiliary mechanical equipment is explained. A comprehensive treatment of cathode-ray tube screens includes a discussion of long-persistent phosphors. A compilation of design techniques, whereby instruments using cathode-ray tubes as major components can be synthesized to fulfill various functions, comprises a major portion of the book. Television is not emphasized.

MICROWAVE RECEIVERS

S. N. Van Voorhis

This book treats together all the elements making up a wide-band receiver. Its first section deals with the individual circuit types from which a complete receiver is assembled. The second section deals with general matters concerning the assembly, testing, and maintenance of microwave receivers. The third section describes actual receivers chosen as examples because they are typical of the important combinations of circuits.

THRESHOLD SIGNALS

J. L. Lawson, G. E. Uhlenbeck

This book is intended to provide an analysis, both theoretical and experimental, of the factors which affect the perception of desired signals in the presence of various kinds of interference, principally inherent receiver noise. While em-

phasis is placed on signals and interference which are usually encountered in pulsed systems, other systems such as continuous-wave ones modulated either in frequency or amplitude are briefly discussed. In addition to signals which consist of trains of pulses, a treatment is given of pulse trains which are amplitude-modulated in some desired way.

THEORY OF SERVOMECHANISMS

H. M. James, N. B. Nichols, R. S. Phillips

This book falls into two main parts; a presentation and extension of the standard theory of servomechanism design, and an account of a new technique. Part I deals with the frequency-response techniques of servomechanism design, which makes use of transfer loci, attenuation versus log-frequency plots, and phase-angle versus log-frequency plots. The required mathematical background is summarized and applications are described. Part II presents a new design technique, which depends upon minimization of the rms error with which the mechanism produces a desired result, in the presence of electrical noise and other disturbances. The approach makes fundamental use of statistical methods, which are here presented, together with necessary background material. The relation of this technique to that discussed in Part I is explored. The discussion is illustrated with many examples. The book closes with an account of the application of these techniques to servomechanisms operating with pulsed data.

RADAR SCANNERS AND RADOMES

W. M. Cady, M. B. Karolitz, L. A. Turner

The first part of this book takes up the problems of mechanical and electrical engineering and of servo design which underlies the design of scanners for practical radar sets. Land-based, shipborne, and airborne scanners are treated. Gyroscopically controlled antenna stabilization is discussed. The second part is devoted principally to the practical mechanical, electrical, and aerodynamic problems of the design of radomes (housings for scanners). It also includes discussion of the properties of the most useful materials, and some development of the theory of the effects of such housings on the radiated waves.

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COMPUTING MECHANISMS AND LINKAGES

A. Scoboda

This book provides a general discussion of computing mechanisms in general, and a detailed study of the design of bar linkages for use

in computers. It includes a full account of novel methods for the design of bar linkages serving as generators of functions of one and two independent variables. Special attention is paid to the design of bar-linkage multipliers.

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ABSTRACT:

A bibliography indexes approximately all of the 2000 technical reports on the microwave radar and Loran navigation research and development program of Division 14 of the NDRC. The reports are indexed by report number, subject, organization, and in the case of MIT Radiation Laboratory, by author. Microfilm prints of the reports are available to those with access to the Summary Technical Reports. A list of titles and an abstract of each book of the Radiation Laboratory Series are given.

DISTRIBUTION: Copies of this report obtainable from CADO.

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AIR TECHNICAL INDEX

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DuBridge, L. A.
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Johnson, M. H.,
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ABSTRACT

Approximately 2000 technical reports on the microwaves, radar and Loran navigation research and development program of Division 14 of the National Defense Research Committee are indexed in this bibliography. Section 1 contains a numerical list of reports which have been assigned Division 14 report numbers. Section 2 is a numerical index of regular reports, manuals, special reports and texts issued by MIT-RL under ONR contract ONR-262. Section 3 is a combined index by subject matter of both Division 14 and MIT-RL reports. Section 4 lists Division 14 reports by the organization responsible for their preparation. Section 5 is an index of MIT-RL reports by author.